

THE EFFECT OF SITUATIONAL INFORMATION ON THE GOAL,
RESISTANCE POINT, AND INITIAL DEMAND CHOSEN BY BUYERS
IN A SIMULATED BUYER-SELLER BARGAINING RELATIONSHIP

By

ARTEGAL R. CAMBURN

A DISSERTATION PRESENTED TO THE GRADUATE SCHOOL
OF THE UNIVERSITY OF FLORIDA IN PARTIAL FULFILLMENT
OF THE REQUIREMENTS FOR THE DEGREE OF
DOCTOR OF PHILOSOPHY

UNIVERSITY OF FLORIDA

1988

TABLE OF CONTENTS

	<u>Page</u>
LIST OF TABLES	iii
LIST OF FIGURES	v
ABSTRACT	vi
CHAPTERS	
1 INTRODUCTION	1
Bargaining	5
Theory	10
Literature Review	37
2 METHODOLOGY	58
Bargaining Context	58
Design of the Study	59
Subjects	72
Materials	74
3 RESULTS	78
Analysis	78
Hypotheses Tests	79
Design Issues	107
4 DISCUSSION	121
Models and Predictions	122
Conclusions	126
Suggestions for Future Research	136
APPENDIX - EXPERIMENTAL INSTRUCTIONS	143
REFERENCES	164
BIOGRAPHICAL SKETCH	169

LIST OF TABLES

<u>Table</u>		<u>Page</u>
1	Buyer and Seller Profits	8
2	Values Designating Each Bargainer's Position	17
3	Values Assigned to the Independent Variables	62
4	Mean Ratings of the Independent Variables	63
5	Demographic Characteristics of the Experimental Sample	74
6	ANOVA Summary Table: Subject's Goal	80
7	Means and Standard Deviations of Subject's Goals by Condition and Gender	81
8	ANOVA Summary Table and Mean Goal Leels Associated with the Seller's Goal (GOALO) Variable	83
9	Mean Goal Levels for the Gender X ALTS X ALTO Interaction	87
10	Mean Goals of Females: ALTS X ALTO Interactions	89
11	ANOVA Summary Statistics: Subject's Resistance Point	92
12	Means and Standard Devviations of Subject's Resistance Point	93
13	Mean Levels of Buyer's Resistance Points Associated with the Gender X ALTO X GOALO Interaction	95
14	ANOVA Summary Statistics; Subject's Initial Demand	100

<u>Table</u>	<u>Page</u>
15	Means and Standard Deviations of Subject's Initial Demand 101
16	Mean Initial Demands: ALTO X GOALO Interaction 103
17	Mean Initial Demand: ALTO and GOALO Variables 105
18	Mean Goals: ALTS 111
19	Mean Goals: ALTO 111
20	Mean Resistance Points: ALTS 114
21	Mean Resistance Points: ALTO 114
22	Mean Initial Demand: ALTS 118
23	Mean Initial Demand: ALTO 118

LIST OF FIGURES

<u>Figure</u>		<u>Page</u>
1	Gender X ALTS X ALTO Interaction	88
2	Gender X ALTO X GOALO Interaction	96
3	ALTO X GOALO Interaction	104
4	Treatment X Position Interaction: ALTS (a) GOALO:Low (b) GOALO:High	112
5	Treatment X Position Interaction: ALTO (a) GOALO:Low (b) GOALO:High	113
6	Treatment X Position Interaction: ALTS (a) GOALO:Low (b) GOALO:High	115
7	Treatment X Position Interaction: ALTO (a) GOALO:Low (b) GOALO:High	116
8	Treatment X Position Interaction: ALTS (a) GOALO:Low (b) GOALO:High	119
9	Treatment X Position Interaction: ALTO (a) GOALO:Low (b) GOALO:High	120

Abstract of Dissertation
Presented to the Graduate School
of the University of Florida
in Partial Fulfillment of the Requirements
for the Degree of Doctor of Philosophy

THE EFFECT OF SITUATIONAL INFORMATION ON THE GOAL,
RESISTANCE POINT, AND INITIAL DEMAND CHOSEN BY BUYERS
IN A SIMULATED BUYER-SELLER BARGAINING RELATIONSHIP

By

ARTEGAL R. CAMBURN

August, 1988

Chairman: Henry Tosi

Major Department: Management and Administrative Sciences

This study examines processes by which individuals use information when choosing their goal, resistance point, and initial demand in a distributive bargaining situation. Hypotheses to be tested were derived from two sources. One group was based on dependence based bargaining power theories. The other group was derived from an alternative goal setting process developed in this study. Situational information given to subjects consisted of the alternative outcome available to the subject (ALTS), the alternative outcome available to the subject's opponent (ALTO), and the opponent's stated goal (GOALO).

These variables were incorporated in a 2 X 2 X 2 within-subjects experimental design. The responses of

106 student subjects were used as the sample. The order of presentation of the experimental conditions was randomly determined by subject. Univariate repeated measures analysis of variance was used to analyze the data generated by the sample with the subject's gender incorporated as a between-subjects factor.

The results of the analyses of variance did not support the hypotheses derived from bargaining power theory. The prediction of the alternative goal setting process was supported. The goal, resistance point, and initial demand of the subjects were primarily affected by the opponent's stated goal. The alternative outcome available to the subject had a small but significant main effect on the resistance point and initial demand chosen by subjects.

There was a Gender X ALTS X ALTO interaction effect found for the subject's goal. There also was a Gender X ALTO X GOALO interaction for the subject's resistance point. A posteriori analyses of these interactions found no main effect for gender.

It was suggested that multiple issue bargaining situations may be more appropriate for examining the effects of situational information on the goal setting process. It was also suggested that gender may affect goal setting in bargaining situations.

CHAPTER 1

INTRODUCTION

Bargaining as a conflict resolution process is found in a variety of situations involving social exchange. The gamut of situations involving bargaining runs from relationships involving two people bargaining over the price of an object to situations in which nations bargain over such issues as limiting strategic weapons. Children bargain with parents, husbands bargain with wives, and unions bargain with management.

It is generally assumed that people engage in bargaining in order to achieve a preferred outcome or goal. Although published reviews of bargaining research (e.g., Rubin & Brown, 1975) suggest that both bargaining outcomes and bargaining processes have been extensively studied, the process by which bargainers choose their goals does not appear to have received much attention. Some initial studies of bargaining incorporating consideration of the bargainers' goals (Siegal & Fouraker, 1960; Kelley, Beckman, & Fischer, 1967; Kahan, 1968; Holmes, Throop, & Strickland, 1971; Pruitt & Drews, 1975; Bazerman, Magliozzi, & Neale, 1985; Neale & Bazerman, 1985;

McAlister, Bazerman, & Fader, 1986) utilized assigned goals. The results of these studies (e.g., Siegal & Fouraker, 1960; Kelley, Beckman, & Fischer, 1967; Kahan, 1968; Holmes, Throop, & Strickland, 1971) suggest that bargainers assigned high goals achieve larger shares of the outcome than do bargainers assigned low goals. Other studies (Bazerman, Magliozzi & Neale, 1985; Neale & Bazerman, 1985; McAlister, Bazerman, & Fader, 1986; Huber & Neale, 1986) also incorporated assigned goals. In these studies, subjects were typically assigned an individual goal from a set of goal conditions (e.g., low goal, moderate goal, or high goal) and were free to negotiate with as many other subjects in the study as they could during a 30 minute time period. Subjects assigned a moderate or high goal were found to achieve higher joint outcomes than subjects assigned to a no goal or moderate goal condition.

The importance of goals in bargaining situations is emphasized in ways other than assigning goals to subjects in experimental research. Both Walton and McKersie (1965) and Raiffa (1982) propose rules of thumb bargainers could follow to identify an appropriate goal for a particular issue. Practical aids for identifying goals, such as the ones proposed by these authors, probably would not be published unless bargaining goals were important.

There is a separate literature on goal setting. It appears to be consistent with those parts of the bargaining literature that incorporated goal variables. The research on goals and performance indicates that goals affect the individual's performance on a variety of tasks (Locke, 1968; Latham & Yukl, 1975; Locke, Saari, Shaw, & Latham, 1981). Goal setting research (e.g., Locke, 1968; Latham & Yukl, 1975; Garland, 1982, 1983; Locke, Frederick, Lee, & Bobko, 1984), also typically incorporates assigned goals. The findings of these goal setting studies support the conclusion that individuals assigned high or difficult goals outperform those individuals assigned low or easy goals. This is consistent with the evidence cited earlier from bargaining studies incorporating goal variables.

Although the process used by people in bargaining situations to choose a goal has not been studied extensively, it has received some attention. The results of a study by Rubin and DiMatteo (1972) were inconclusive. These authors manipulated the alternative outcome available to each subject and the bargaining outcome actually achieved by each subject. They found the subject's goal for a future negotiation session depended on the subject's bargaining outcome but were not related to his or her alternative outcome. In another study Huber and Neale (1986) concluded that a bargainer's goal for a future

negotiation session was a function of the bargainer's Machiavellianism and the profit earned by the bargainer in an earlier bargaining session. The goals assigned to subjects by these authors for the negotiation session affected the subjects' bargaining performance but did not directly affect the subjects' goals for a future bargaining session.

Recent developments in both the areas of bargaining theory and goal setting add to the possible importance of the goal-performance relationship. For example, there are three models of bargaining power which emphasize the importance of goals (Emerson, 1962; Komorita, 1977; Bacharach & Lawler, 1981). Each of these models explicitly incorporates the goals of the bargainers in the relationship as independent variables and makes predictions for both bargaining behavior and bargaining outcomes. In the goal setting area Garland (1985) proposes a model relating goals to performance that explicitly incorporates goal setting. He offers general suggestions as to the process individuals may use to choose a goal in the absence of assigned goals. Thus, the Garland (1985) study may be applicable to goal choice in a bargaining context.

The preceding discussion indicates that theorists (e.g., Komorita, 1977; Garland, 1985) and others (e.g., Siegal & Fouraker, 1960; Latham & Yukl, 1975; Huber & Neale, 1986) place a significant emphasis on the goals of individuals as determinants of performance in a bargaining

context as well as other contexts. Given this emphasis it seems appropriate to examine the process by which people in a bargaining situation choose a bargaining goal. This study aims to do that by integrating theoretical developments involving bargainers' goals with research studies incorporating bargaining goals in order to develop hypotheses for testing. These hypotheses will then be tested in a bargaining context.

Bargaining

Walton and McKersie (1965) identified and defined four types of bargaining. These types are distributive, integrative, attitudinal structuring, and intraorganizational. Although, by definition, each of these types of bargaining represent a conflict of interest, the emphasis in this study will be on distributive bargaining. According to Rubin and Brown (1975) distributive bargaining can be characterized by the following process. There are at least two individuals who are in the relationship on a voluntary basis. The bargaining process usually follows a repeating sequence of proposal by one and counterproposal by the other bargainer. After each bargainer has proposed an initial settlement, subsequent iterations of this sequence usually incorporate concessions by one or both bargainers in turn. Agreement or resolution occurs as the result of the two bargainers'

concessions converging to a single outcome level. If neither bargainer is willing to concede a stalemate is taken as the outcome.

Distributive Bargaining

According to Walton and McKersie (1965) a distributive issue is one in which a gain in outcome on the issue for one bargainer implies a loss of an equal size for the other bargainer. It is this zero sum characteristic that acts primarily to distinguish distributive bargaining from the other three types. Distributive issues represent the most basic conflict of interest of the four types defined by Walton and McKersie (1965). Distributive issues have been operationally defined in a number of ways in the bargaining research literature. The issue used by Siegal and Fouraker (1960) was an economic issue which was stated in terms of the price and quantity for a commodity. The issue used by Deutsch and Krauss (1960) was the use of a one-lane section of road in a trucking game (i.e., The Acme-Bolt Trucking Game). Hornstein (1965) used the sale of land as an issue in a simulated real estate bargaining context. Thibaut and Fauchex (1965) and Kahan (1968) utilized the division of a fixed number of points as their issue. In each of the examples cited the total available outcome on the issue was finite. What one bargainer

gained the other bargainer lost in terms of their respective outcomes.

Integrative Bargaining

Integrative bargaining involves issues that represent a variable sum outcome rather than a constant sum outcome (Walton & McKersie, 1965). Because the issue represents a variable-sum outcome, an increase in outcome share for one bargainer does not automatically mean the other bargainer's outcome share would be reduced by an equal amount. It is therefore possible for each bargainer to achieve a high or relatively high outcome.

Pruitt and Lewis (1975) developed an issue structure that appears to reflect the essence of integrative issues as defined by Walton and McKersie. An example of this issue structure is shown in Table 1. The issue structure developed by Pruitt and Lewis (1975) is a multiple issue structure comprised of three distinct issues which are called X, Y, and Z.

Issue Y is structured as a true distributive issue because an increase in outcome share on Y for the buyer means the seller's outcome share on Y would be decreased by a like amount and vice versa. The profit or payoff for the other two issues (X & Z) differs for the buyer and the seller. Issue X represents a much greater profit than Z for the buyer, while Z represents a much greater profit

Table 1
Buyer and Seller Profits

Buyer			Seller		
X	Y	Z	X	Y	Z
Price Profit	Price Profit	Price Profit	Price Profit	Price Profit	Price Profit
A 2,000	A 1,200	A 800	A 000	A 000	A 000
B 1,750	B 1,050	B 700	B 100	B 150	B 250
C 1,500	C 900	C 600	C 200	C 300	C 500
D 1,250	D 750	D 500	D 300	D 450	D 750
E 1,000	E 600	E 400	E 400	E 600	E 1,000
F 750	F 450	F 300	F 500	F 750	F 1,250
G 500	G 300	G 200	G 600	G 900	G 1,500
H 250	H 150	H 100	H 700	H 1,050	H 1,750
I 000	I 000	I 000	I 800	I 1,200	I 2,000

than X for the seller. The diagonal solution A-E-I represents the maximum individual profit (2,600) and the maximum joint profit (5,200) for all possible solutions. Horizontal agreements (e.g., E-E-E) represent compromise which typically yield lower joint profits, e.g., 4,000, although the profit could be very high for one of the two bargainers if compromise is the mode of resolution.

According to Pruitt and Lewis (1975), the maximum outcome (individual and joint) can only be achieved if the bargainers tend to cooperate rather than compete. In the example shown in Table 1, such cooperation would be shown by each bargainer's willingness to concede on the issue with the lowest profit from his or her perspective while compromising on Y. It is this cooperative aspect (Pruitt & Lewis, 1975) that differentiates integrative bargaining from distributive bargaining. In this study, a distributive bargaining context will be used to develop and test hypotheses. A distributive bargaining situation will be used because distributive bargaining contexts appear to be simpler than many of the other types (e.g., integrative), by definition. Thus, the development and testing of predictions from theoretical models should be a more straightforward process.

Theory

Goals and Goal Choices

An individual entering a bargaining relationship with another person can face a dilemma. In spite of the general belief that people bargain with one another to achieve a goal, or preferred outcome, it is probably true that individual bargainers often do not know what outcome level is either appropriate or achievable for a given bargaining situation (Kelley, 1966). If the individual chooses a goal that is too high, the other person will be likely to leave the relationship rather than negotiate. If the individual chooses a goal which is too low, he or she will probably reach an agreement with the other. The payoff to the individual however, would be less than he or she could have gotten from the relationship. Thus, the dilemma the individual faces is one of choosing the goal which represents the maximum payoff available from the relationship.

Walton and McKersie (1965) and Raiffa (1982) suggest that the individual should choose the minimum outcome which is acceptable to the opponent as the individual's goal. In practice, however, this would be difficult for the individual to do this because the opponent would be unlikely to disclose such information. The reason behind

the opponent's reluctance seems obvious. The bargaining would probably be circumvented because the bargainer would be likely to offer a settlement that was equal to the opponent's minimum acceptable outcome.

There are a number of theoretical models of bargaining power which incorporate goals and which are used to predict concession behavior and bargaining outcomes (Emerson, 1962; Komorita, 1977; Bacharach & Lawler, 1981). Two of these models (Komorita, 1977; Bacharach & Lawler, 1981) also suggest that the individual's goals may change as a function of his or her power. The model proposed by Komorita (1977) will be used here to examine goals and goal choices in a bargaining context power. An alternative goal setting process built around the goal-performance model developed by Garland (1985) will also be presented.

Strategic Power

Komorita (1977) proposed a model of strategic power which is stated in terms found in bargain contexts.

According to Komorita (1977), a bargainer will have strategic power (SP) when the pressure to reach agreement (P) is greater for the opponent than it is for the bargainer as shown in Equation 1.

$$SP_i = P_j - P'_j \quad (1)$$

where SP_i is the strategic power of bargainer i ; P'_j is the opponent's pressure to reach agreement as perceived by bargainer i ; and P_i denotes the pressure on i to reach agreement.

The pressure to reach agreement (P) for each bargainer is derived by adding the bargainer's motive to reach agreement (M) to the bargainer's cost of prolonging negotiations (C). The bargainer's motive to reach agreement (M) is equal to the difference between the bargainer's goal (G) and the outcome available to the bargainer from an alternative relationship ($CL(alt)$).

$$M_i = G_i - CL(Alt)_i \quad (2)$$

where M_i represents the bargainer's motive to reach agreement; G_i denotes the bargainer's goal and $CL(Alt)_i$ represents the best or maximum outcome the bargainer expects from an alternative relationship. The bargainer's pressure to reach agreement is shown in equation 3:

$$P_i = M_i + C_i \quad (3)$$

where P_i denotes the pressure to reach agreement; M_i represents the bargainer's motive to reach agreement; and C_i denotes the bargainer's cost of prolonging bargaining. The cost term (C) is not precisely defined. It is assumed to incorporate such factors as the cost of the bargainer's time as well as threats or sanctions the opponent could apply to the bargainer (Komorita, 1977).

Komorita (1977) uses the bargainer's expected outcome of bargaining ($\hat{E}$) in place of the bargainer's goal (G) term. These terms appear to be equivalent given the conceptual and operational definitions proposed for goals (e.g., Garland, 1985; Siegal & Fouraker, 1960). Therefore, for the sake of simplicity and clarity, goal will be used in this study instead of the expected outcome of bargaining. This is shown in equation 2.

Two assumptions that apply to the strategic power model (Komorita, 1977) are

1. The motive to reach agreement is assumed to be positive for both bargainers. If either one or both bargainers has a negative motive to reach agreement, bargaining is not expected to take place.
2. It is assumed, by implication, that the two parties in the relationship are motivated to bargain for gain and not to maximize the other's losses. Otherwise bargaining would not be expected to take place (Komorita, 1977).

If equations 2 and 3 are substituted into equation 1, as shown in equation 4, the relationship between the terms can be seen more easily.

$$SP_i = (M'_j - M_i) + (C'_j - C_i) \quad (4)$$

where M'_j and C'_j denote the opponent's respective motive to reach agreement and costs of prolonging bargaining, as perceived by the bargainer, and M_i and C_i represent the bargainer's motive to reach agreement and cost of prolonging bargaining.

According to Komorita (1977) the following outcomes should obtain depending on the bargainer's perceived strategic power (SP). The discussion assumes that the bargainer has relatively accurate information in regard to the variables contained in equation 4 (Komorita, 1977).

If the bargainer's strategic power is positive, the bargainer will infer that he or she is in a stronger position relative to the opponent's position. For example, this could be due to the opponent having a high goal relative to his or her alternative outcome and/or the bargainer's ability to inflict larger bargaining costs on the opponent. If the bargainer perceives that he or she is in the stronger position (i.e., the bargainer's SP is positive) he or she will expect larger concessions from the opponent according to Komorita (1977).

If, on the other hand, the bargainer's motive to reach agreement was greater than the opponent's motive to reach agreement and/or the opponent could inflict greater bargaining costs on the bargainer than the bargainer could inflict in return, the bargainer's strategic power would be negative. The bargainer should then infer that he or she was in a weaker position relative to the opponent's position (Komorita, 1977) and the opponent should realize that he or she has strategic power. Therefore, the opponent should expect larger concessions from the bargainer.

The preceding discussion does not address issues which are associated with the individual's bargaining ability regardless of which bargaining position the individual occupies. The use of such tactics as bluff or deceit are examples (Komorita, 1977) of variables believed to fit in this category. It could be argued that a bargainer who is able and willing to use such tactics would have an advantage over an individual who was less able or less willing to use them. According to Komorita (1977) this is not likely to be the case. He argues that possession of the relatively accurate information required to estimate the bargainer's strategic power makes it unlikely that an opponent would try to use such tactics. Furthermore, if an opponent did attempt to use such tactics to offset an objectively weaker position, the final outcome of bargaining should not be significantly affected (Komorita, 1977) because the bargainer with power would be able to resist.

The utility of strategic power as it is developed and applied by Komorita (1977) lies in what it allows bargainers to do with the position information represented by the variables in equation 4.

$$SP_i = (M'_j - M_i) + (C'_j - C_i) \quad (4)$$

On one hand it allows each bargainer to develop realistic and valid expectations for the other's total concessions or the size of the other's concessions during bargaining. It also allows the bargainer with strategic power to

resist the other's use of tactics such as bluff in attempting to gain a tactical advantage.

There is another outcome that should obtain from the model developed by Komorita (1977) if distributive issues are incorporated in the discussion. This has not been discussed previously but it logically follows that if, and when, a distributive issue is incorporated, the model predicts that each bargainer should adjust his or her goal to be consistent with his or her strategic power.

In order to make this prediction more easily seen and understood, the following example will be used. The issue is one in which two individuals (A & B) must agree to a division of 1000 points in order to receive a payoff. Each individual will receive \$1.00 for each 100 points of outcome share. Each individual will be given 100 points if no agreement is reached. Therefore, each has an alternative outcome (CL(alt)) which is equal to 100 points and represents a payoff of \$1.00. Individual A is assigned a goal of 250 points while B is assigned a goal of 750 points. The situation described is shown in Table 2.

The information contained in Table 2 reflects all the variables incorporated in the Komorita (1977) model except for the cost terms. The costs of prolonging bargaining (C) for each bargainer are assumed to be equal, therefore bargaining costs do not make a unique contribution to the

Table 2
Values Designating Each Bargainer's Position

A	B
Goal = 250 points	Goal = 750 points
CL(alt) = 100 points	CL(alt) = 100 points

$$SP_i = (M'_j - M_i) + (C'_j - C_i) \quad (4)$$

individuals' strategic power as equation 4 indicates. Therefore, each bargainer's (A or B) strategic power in this case is only a function of the difference between the respective bargainers' motive to reach agreement (M) which is calculated by equation 2.

$$M_i = G_i - CL(alt)_i \quad (2)$$

According to equation 2, A's motive to reach agreement is equal to 150 while B's motive to reach agreement is equal to 650. By equation 4, B has the larger motive to reach agreement. Therefore, A will have strategic power.

According to the model, A should expect B to make larger concessions (Komorita, 1977). Because A should expect B to make larger concessions during bargaining, A's goal should increase or be increased to reflect this expectation.

This prediction is based on the relationships between concessions and outcomes that are explicitly specified by the definition of distributive issues (Walton & McKersie,

1965). The discussion assumes that a settlement has been or will be reached.

1. The outcome share achieved by one individual will be inversely related to that individual's total concessions during bargaining or, the more one concedes the less one will get.
2. The total concessions of one bargainer will be inversely related to the total concessions of the other bargainer.

These relationships have significant implications for the predictions of the strategic power model (Komorita, 1977). In the example given earlier, bargainer A had strategic power because B's motive to reach agreement was greater than A's. The model predicts that A should expect B to make larger concessions. Based on the relationships between concessions and outcomes for distributive issues that are specified, by definition, A should also develop the following expectations.

1. If A expects B to make larger or more concessions, then A should expect to make smaller or fewer concessions.
2. If A expects to make smaller or fewer concessions than B, then A should expect his or her outcome share to increase.

If A's and B's positions are reversed, the following should obtain.

3. A should expect to make larger or more concessions because B has strategic power.
4. If A expects to make larger or more concessions then A should expect his or her outcome share to be smaller.

These derivations suggest that the strategic power model (Komorita, 1977) should, in effect, lead to goal adjustment or goal modification. In general terms, each bargainer in the relationship should adjust or modify his or her initial goal to a level which is consistent with his or her perceived strategic power. Therefore, the bargainer's initial goals should be adjusted in response to changes in the bargainer's alternative outcome, the opponent's alternative outcome, and the opponent's goal because each has an effect on the individual's relative strategic power, assuming the costs of prolonging bargaining do not enter in the equation determining strategic power. In terms of a buyer-seller bargaining relationship, for example, these expectations can be stated in three propositions, one for each of the three variables (the bargainer's CL(alt); the opponent's CL(alt); and the opponent's goal).

Proposition 1: The buyer's goal should be increased if the buyer's alternative outcome increases, assuming the seller's position remains constant.

Proposition 2: The buyer's goal should be increased if the seller's goal is increased, assuming the alternative outcomes available to the seller and the buyer remain constant.

Proposition 3: The buyer's goal should be decreased if the seller's alternative outcome is increased, assuming the buyer's alternative outcome and the seller's goal remain constant.

Each of the propositions reflect the predicted changes in the bargainer's strategic power that should occur as a

function of the changes in the buyer's alternative outcome, the seller's goal, and the seller's alternative outcome. In the first case the buyer's motive to reach agreement would be lower because the buyer's alternative outcome would be increased. Therefore, the buyer's strategic power should be increased. In the second case, the buyer's motive to reach agreement remains constant but the seller's motive to reach agreement is increased. This, too, should act to increase the buyer's strategic power. The last proposition represents a loss in the buyer's strategic power. The seller's motive to reach agreement would be decreased while the buyer's motive to reach agreement would remain constant.

Modified Strategic Power Model

The strategic power model predicts that the bargainer's goals should shift in a direction that is consistent with the bargainer's strategic power in the relationship. As a bargainer's strategic power increases the goal should rise, as it decreases the goal should fall. Although these expectations are logical and can be stated in the form of hypotheses, it may be difficult to test these hypotheses in practice. The difficulty lies with the initial goals of the individuals in the relationship. Although Komorita (1977) assumes that individual bargainers have an initial goal, he does not address the issue of how they derived or chose their initial goal.

In experimental bargaining settings, the simplest means of establishing an initial goal appears to be to assign a goal to each individual. This may not be appropriate when the focus is on adjustment or modification of bargaining goals. The evidence from bargaining research which incorporates goals (e.g., Siegal & Fouraker, 1960; Kelley, Beckman, & Fischer, 1967; Kahan, 1968; Kelley, et al., 1970; Holmes, Throop, & Strickland, 1971; Bazerman, Magliozzi, & Neale, 1985; Neale & Bazerman, 1986; McAlister, Bazerman, & Fader, 1986) suggests that individuals are reluctant to accept bargaining outcomes that are below their assigned goal. If bargaining subjects are reluctant to accept an outcome that is below their assigned goals, they may also be reluctant to modify their assigned goal upwards or downwards as a function of strategic power. Assigning a goal may act to preclude the expected goal adjustment or modification by individual subjects regardless of their objectively defined strategic power. The demand effect of the assigned goal could, and may be likely to, overwhelm the effect of perceived strategic power if such an effect is present. In order to minimize the likelihood that assigning initial goals to subjects would create a demand effect, the assumption that bargainer's have an initial goal may need to be relaxed.

Relaxing the assumption that the individual has an initial goal for bargaining raises an important question.

What effects would this change have on the model and the predictions derived from the Komorita (1977) model?

Although it is clear that a subject would not be able to estimate his or her own motive to reach agreement, the subject still could estimate the opponent's motive to reach agreement because the subject would have knowledge of the opponent's available alternative outcome and goal. Is the subject's inability to estimate his or her own motive to reach agreement critical? An examination of the predictions of the model suggest that the answer is no: the subject's inability to initially estimate his or her motive to reach agreement should not be critical.

According to the model a subject should increase his or her goal if the solution to equation 4 is positive and decrease his or her goal if this solution is negative.

$$SP_i = (M'_j - M_i) + (C'_j - C_i) \quad (4)$$

In functional terms, the individuals motive to reach agreement would increase or decrease depending on the direction of the adjustment as can be seen from equation 2.

$$M_i = G_i - CL(alt)_i \quad (2)$$

As a result of this expected change, the subject's motive to reach agreement would tend to be equalized with the other person's motive to reach agreement.

Therefore, a subject entering a bargaining relationship without an initial goal should be able to choose a

goal that would be comparable to the goal he or she would have otherwise chosen as the result of the adjustment process. The subject would have enough information to estimate the other's motive to reach agreement. The subject would also know his or her available alternative outcome. With this information, the subject could identify and choose the goal that tends to bring the subject's motive to reach agreement into equilibrium with the other person's motive to reach agreement. The same outcome, or a similar one, is therefore predicted by the modified strategic power model as is predicted by the Komorita's (1977) original model. The three propositions shown on p. 19 should basically still apply. All that need be changed in these propositions would be to restate them in terms of choosing a goal rather than in the terms of adjusting an initial goal.

These new propositions are stated below as 1a, 2a, and 3a in terms of the buyer in a buyer-seller relationship.

Proposition 1a: The buyer's goal should be higher if the buyer's alternative outcome is increased, assuming the seller's position remains constant.

Proposition 2a: The buyer's goal should be higher if the seller's goal is increased, assuming the alternative outcomes for the seller and the buyer remain constant.

Proposition 3a: The buyer's goal should be lower if the seller's alternative outcome is increased, assuming the buyer's alternative outcome and the seller's goal remain constant.

Hypotheses

Hypotheses are derived from the propositions (1a, 2a, 3a) stated earlier. These hypotheses are stated in terms of a buyer-seller bargaining relationship. The subject bargainer is assigned to the buyer's role with the opponent taking the role of the seller. It is assumed the buyer knows the seller's goal and is aware of his or her own and the other's available alternative outcome. In buyer-seller bargaining contexts the relationship between the variables used in the model (goals and alternative outcomes) and prices for the item differ for the two positions. A higher goal or alternative outcome represents higher prices for the item from the seller's position. An analogous higher goal or alternative outcome would be expressed as lower prices in the context of the buyer's position. This also means that an increase in the buyer's goal would be expressed as a lower price. There are three hypotheses that are derived from the three propositions (1a, 2a, 3a) concerning the buyer's goal.

- H₁: The buyer will expect to pay a higher price for the commodity when the seller has a high alternative outcome than when the seller has a low alternative outcome, given that the seller's goal remains constant.
- H₂: The buyer will expect to pay a lower price for the commodity when the buyer's alternative outcome is high than when the buyer's alternative outcome is low.
- H₃: The buyer will expect to pay a lower price for the commodity when the seller's goal is high than

when the seller's goal is low, given that the seller's alternative outcome remains constant.

The central aspect of the Komorita (1977) strategic power model is the individual's motive to reach agreement. As the individual's motive to reach agreement increases, his or her strategic power decreases. Propositions 1a, 2a, and 3a reflect what should happen to the individual's goal as the other person's motive to reach agreement changes. As the other person's motive to reach agreement is high, the individual's goal should be high or higher. If the other person's motive to reach agreement is low, the individual's goal should be low. The individual's goal should be lower if the other person's motive to reach agreement is low than if the other person's motive to reach agreement is high. The model also suggests that the individual's goal should be highest in one set of conditions and lowest in a different set of conditions. The individual's goal would fall between the extremes of highest and lowest for all other conditions. The model, in a sense, identifies the boundaries or limits the individual's goal should take for a given set of conditions.

The individual's goal should be highest if:

The individual's alternative outcome is high and the other person's motive to reach agreement is high.

The individual's goal should be lowest if:

The individual's alternative outcome is low and the other person's motive to reach agreement is low.

These two predictions are reflected by the fourth and fifth hypotheses.

H₄: The price the buyer will expect to pay for the item will be lowest if the buyer's alternative outcome is high, the seller's alternative outcome is low, and the seller's goal is high.

H₅: The price the buyer will expect to pay for the item will be highest if the buyer's alternative outcome is low, the seller's alternative outcome is high, and the seller's goal is low.

Komorita (1977) suggests that the individual bargainer's alternative outcome should operate as a lower bound to the bargaining range of possible outcomes. The bargaining range is generally taken to reflect or represent the range of settlement outcomes which are possible for a particular issue (i.e., outcomes one or the other would be willing to accept). A settlement outcome that is outside this range would not be possible because one or the other of the individuals would refuse to accept it. What is suggested then, is that each party's (e.g., buyer or seller) alternative outcome defines that particular individual's minimum acceptable outcome.

The suggestion that the alternative outcomes available to the two parties will define the boundaries of the range of expected or possible outcomes is plausible. It is consistent with the expectations and implications for the available alternative outcomes (CL(alt)) set forth by Thibaut and Kelley (1959).

There are two ways to interpret the suggestion put forth by Komorita (1977) concerning the relationship between the individuals' alternative outcomes and the boundaries of the range of bargaining outcomes. In this discussion the term "lower bound" is defined as the minimum acceptable outcome the individual would accept as a settlement through bargaining. In terms applicable to the buyer's position this would be expressed as the maximum price the buyer would be willing to pay for the item in question. Because the buyer would resist paying a higher price than his or her maximum price, the maximum price will be called the buyer's resistance point (RP). A strict interpretation of the suggestion by Komorita (1977) implies the following:

The buyer's resistance point will be equal to the buyer's available alternative outcome.

The strict interpretation of the suggestion made by Komorita (1977) assumes that the individual would be willing to accept any settlement which was better than the one represented by his or her resistance point. The individual might not prefer some of the settlements which were slightly better than his or her resistance point, but the individual is assumed to be willing to accept them.

It could be the case that an individual's resistance point would be related to his or her alternative outcome without being equal to it. A buyer, for example, could be in a position in which he or she was unable or unwilling

to pay the price for an item represented by his or her alternative outcome. The individual's alternative outcome would not accurately define the bargaining range. The bargaining range may be related to the two individuals alternative outcomes but not defined by them. A more relaxed expectation for the suggested relationship between the buyer's alternative outcome and resistance point would be:

The buyer's resistance point will be related to the buyer's available alternative outcome. The buyer's resistance point would be higher if he or she had a high alternative outcome than if the alternative outcome was low.

These predictions are stated in the following hypotheses.

- H₆: The maximum price the buyer would be willing to pay for the item will be equal to the price represented by the buyer's alternative outcome.
- H₇: The maximum price the buyer would be willing to pay for the item will be lower if the buyer has a high alternative outcome than if the buyer's alternative outcome is low.

According to the suggestion by Komorita (1977) the alternative outcome available to the buyer defines the upper bound of the bargaining range (i.e., the maximum price for the item). By analogous reasoning the alternative outcome available to the seller would define the lower bound of the bargaining range because it represents the seller's minimum acceptable outcome. The seller's minimum acceptable outcome is the best possible outcome the buyer can achieve in a given situation. Therefore, it is logical to suggest that:

The buyer's initial demand (ID) or opening offer should be equal to the seller's alternative outcome.

It is also appropriate to assume that a buyer or other individual might not start with an opening offer which was equal to the other person's alternative outcome, though the opening offer might be related to the other's alternative outcome. It is possible that the seller's alternative outcome is a price so low that the buyer does not perceive it to be credible. In such an instance it may be plausible for the buyer to base his or her initial demand on the seller's available alternative outcome but not make the two be equal. This would be represented by the proposition that:

The buyer's initial offer will be lower if the seller's alternative outcome is low than if the seller's alternative outcome is high.

These predictions are shown in the following two hypotheses:

- H₈: The initial price for the item that is offered by the buyer will be equal to the price for the item represented by the seller's alternative outcome.
- H₉: The initial price for the item that is offered by the buyer will be lower if the seller's alternative outcome is low than if the seller's outcome is high.

Summary

In the preceding discussion, the strategic power model proposed by Komorita (1977) was presented and developed. The model was used because it is presented and

stated in clear and straightforward terms. It incorporates similar concepts and makes similar predictions to the bargaining power models proposed by Emerson (1962) and Bacharach and Lawler (1981). Because the Komorita (1977) model is stated in terms which can be easily translated to distributive bargaining contexts (e.g., the variables can be expressed in terms of levels on the issue) the process of developing operational definitions should be relatively easy. Furthermore, it should facilitate the process of developing and applying valid tests of the predicted relationships. The similarity between the Komorita (1977) model and the other two models (Emerson, 1962; Bacharach & Lawler, 1981) suggests that research studies that examine the other two models may also apply to the Komorita (1977) model.

Alternative Goal Setting Process

Another process of goal setting in bargaining can be developed from Garland's (1985) model linking task goals to task performance. Garland (1985) defines a task goal as "an image of a future level of performance that the individual wishes to achieve." He defines a task as "a body of work requiring mental or physical activity." A task, or tasks, may come from the individual's environment, interests, or role responsibilities. Tasks may be self chosen or assigned and may or may not have an

explicit standard of performance associated with the task (Garland, 1985).

Task goals are central to the model developed by Garland (1985). Task goals may be explicit such as an externally derived standard or an assigned goal, or the task goal may be internally determined. In the absence of an assigned goal, individuals are assumed to look for cues that could and would inform them of an appropriate performance level. The information from the cue or cues would be used by the individual to develop a goal.

Garland (1985) uses the work environment as the context in which his model is described. Individuals in work environments expect to perform certain activities for which they will receive a reward or rewards. Thus, the individuals are predisposed to perform though they may not initially know exactly what tasks they are to perform. They also may not know what level of performance will be expected of them. Assigning a goal to these individuals in the form of an externally derived performance standard will tell them what is an appropriate performance level. If no external standard is assigned, Garland (1985) suggests that these individuals will examine the context of the task for cues or clues indicating what is an appropriate performance level or a task goal to be achieved. The individual's co-workers or peers may be a

source of information or cues about appropriate performance levels, for example.

It is suggested that individuals in a bargaining situation like the one described in the Komorita (1977) model may act as Garland (1985) suggests. The situation is one in which the individuals can measure his or her performance. The individual receives feedback directly from the task context itself rather than an external source such as an agent. The bargaining context as described by Komorita (1977) contains information (e.g., alternative outcomes available to each plus the other person's stated goal) which could be used as cues for goal setting. In experimental bargaining research there often are explicit standards of performance (i.e., an assigned goal) present in the studies (e.g., Siegal & Fouraker, 1960; Kelley, Beckman, & Fischer, 1967; Kahan, 1968; Kelley et al., 1970; Holmes, Throop, & Strickland, 1971; Bazerman, Magliozzi, & Neale, 1985; Neale & Bazerman, 1985; McAlister, Bazerman, & Fader, 1986; Huber & Neale, 1986). Thus, the elements that Garland (1985) emphasizes in the description of his model appear to be present in the bargaining context described here.

Garland (1985) suggests that individuals search the task environment for performance level cues if external standards of performance are absent. The information present in bargaining situations described by bargaining

power models (e.g., Komorita, 1977; Bacharach & Lawler, 1981) consists of the alternative outcomes available to the individual and the other person and the other person's goal. It is argued here that this information could be used as cues in choosing a goal as Garland (1985) suggests.

It is possible that the individual could use the alternative outcome available either to himself or to the opponent as a cue for selecting a goal. Because these variables are expected to act as upper and lower bounds to the bargaining range, they do not seem to be prime candidates for setting the goal. The remaining item of information available to the individual is the stated goal of the other person in the relationship. It is suggested here that the individual will use the other's expressed goal as the primary cue for choosing a goal. The suggested process of goal choice differs significantly from the process described by Komorita (1977) as does the outcome.

The individual is expected to choose a goal that is complementary to the goal expressed by the other person in the relationship. As the other's goal increases, the individual's goal would decrease, for example. The rationale for this prediction is derived from the nature and structure of distributive bargaining.

Garland (1985) defines a task goal as the performance level the individual wants to achieve. In a bargaining context the goal would be the outcome the individual wants to achieve in terms of share of the issue being bargained. Distributive issues represent constant sum outcomes by definition (Walton & McKersie, 1965). Therefore, an increase in the outcome share of one individual would be offset by a like reduction in the other person's outcome share. Because distributive bargaining is at least a two party process, the outcome share of any one person in the relationship is mutually determined by all the individuals in the relationship. This is true except in situations which are characterized by one of the individuals refusing to concede. The action of the one individual could force all those in the relationship into a stalemate or otherwise reduce the outcomes of each person.

In order for the individual to achieve his or her goal, the other individual in the relationship must agree to an outcome that equals the individual's goal. If the other will not agree to such a settlement, the individual simply will not achieve his or her goal. In most distributive bargaining situations there is little the individual can do to make the other person accept outcomes that are below the person's resistance point. Because this type of control is reciprocal, it follows that the

individual can also exercise control over the outcome achieved by the other.

The one item of information that would be most useful to an individual when choosing a goal in a bargaining situation is the other's resistance point or minimum acceptable outcome. It was shown earlier, however, that this particular item of information is likely to be unavailable. In the situation described by the Komorita (1977) model, the individual would only know the other person's goal in terms of outcome on the issue. The other person's goal represents the outcome he or she would like to achieve. In terms of the issue being bargained the other's goal also represents a proportion of the issue (i.e., the proportion the other intends to achieve). The remaining proportion of the issue is what the individual can achieve from bargaining unless the other person can be persuaded to accept less. If the other will not accept less than his or her goal, the individual cannot achieve more than the share of the issue which remains after the other person's share is removed.

Therefore, the individual appears to have little choice in the matter except to accept the share that appears to be available. This would be expressed as a goal that was the complement of the other person's goal in the terms of the issue being bargained. Unless the individual has reason to believe the other's goal did not

reflect the other's true intentions or expectations, he or she is likely to accept the goal at face value. In other words, he or she would tend to view the other's goal as the point at which the other person would begin to resist making further concessions. Although the individual may expect his or her opponent to accept an outcome slightly below the goal, the individual probably would not expect the other person to accept an outcome significantly below the stated goal.

One implication of the reasoning stated above is that the opponent could use the individual's lack of knowledge about the true validity of the opponent's goal to his or her advantage. The opponent could inflate the stated goal which might increase his or her outcome. There is no way the individual could know whether goal inflation was present or how much the goal had been inflated. Although the opponent could inflate his or her goal, the same issues concerning the pressures on bargainers that were discussed earlier should apply to the opponent as well as to the individual. If a seller sets his or her goal too high, buyers may be reluctant to engage in bargaining with the seller.

Although the issues pertaining to goal inflation are interesting in and of themselves, the emphasis of this study is on goal setting or goal choice. Therefore, it is assumed by implication that the subjects (i.e., the buyer)

will respond to the opponent's goal as if the goal were not significantly inflated. The alternative goal setting process outlined earlier predicts that:

the buyer's goal will be lower when the seller's goal is high than when the seller's goal is low.

The relationship between the seller's goal and the buyer's goal as predicted by the alternative goal setting process becomes hypothesis ten (H_{10}).

H_{10} : The buyer will expect to pay a higher price for the item if the seller's goal is high than if the seller's goal is low.

Literature Review

There is a substantial body of bargaining research in which the variables used by Komorita (1977) to describe individual bargaining positions have been manipulated. These variables are: The goals of the bargainers, the alternative outcomes available to the bargainers, and the costs of prolonging bargaining.

Goals of Bargainers

Distributive bargaining. The effect of the goal variable has been examined in a variety of bargaining situations. The emphasis of much of this research has been on the effect of assigned goals on the bargaining behavior (e.g., concession behavior) of subjects or on the outcome share achieved by subjects.

Siegal and Fouraker (1960) manipulated goals by assigning either a high or low level of aspiration (LA) to subjects. A bargainer's LA was defined as the minimum outcome the bargainer needed to achieve through agreement in order to qualify for a prize (i.e., chance to double his or her profit). High LA subjects were paired with low LA opponents in a bilateral monopoly bargaining relationship and the subjects bargained until an agreement was reached. The sum of the two bargainer's LA's was less than total reward available, therefore it was possible for each bargainer in a dyad to achieve his or her goal. High LA (goal) subjects made higher initial demands, fewer concessions, and achieved larger shares of the outcome than did the subjects with a low LA.

Kelley, Beckman, and Fischer (1967) manipulated the subject's goal by assigning a minimum necessary share (MNS) to each subject. A wider range of assigned MNS values than the two used in the Siegal and Fouraker study was used and the subject pairings for bargaining dyads incorporated equal and unequal MNS values. The observed outcomes tended to follow the pattern found by Siegal and Fouraker. High MNS subjects made higher initial demands, fewer concessions, and achieved larger shares of the outcome than did the low MNS subjects. Subjects in the unequal MNS conditions tended to take more time reaching

agreement and to break off bargaining more often than subjects in the equal MNS condition.

Kahan (1968) incorporated three levels of MNS values (assigned equally) which were arranged so the sum of the MNS values were slightly less, slightly greater or significantly greater than the available total outcome. A fourth condition, in which the subjects assigned MNS values were unequal with the sum of MNS values slightly in excess of the available outcome was also included. An equal and constant alternative outcome was made available to subjects in case a stalemate occurred in negotiations. The availability of an alternative outcome allows each subject to achieve something in case he or she is unwilling to accept the opponent's final offer. Kahan (1968) found that subjects took longer to reach agreement as the sum of the two subjects' MNS values approached and exceeded the available outcome. He found that fewer agreements were reached and subjects chose the alternative more often as the sum of the subject's LA exceeded the available outcome. Kelley, et al. (1970) called this relationship "bargaining difficulty." They obtained similar outcomes to those found by Kahan (1968) as the bargaining difficulty increased. Subjects, in a cross-cultural study of bargaining took longer to reach agreement and made fewer agreements as the bargaining difficulty increased.

Holmes, Throop, and Strickland (1971) manipulated both the subject's level of aspiration and MNS. Level of aspiration was incorporated as a within dyad factor (high vs low), while minimum necessary share was a between subjects factor. Overall, high LA subjects made higher initial demands, fewer concessions, and achieved a larger share of the outcome than did the low LA subjects. The effect of the MNS variable, however, was mixed. Subjects with a low LA and a high MNS made lower initial demands than subjects with a low LA and a low MNS. But, the low LOA-high MNS subjects made fewer concessions during bargaining, and achieved a larger share of the outcome than the subjects with a low LA and a low MNS. This effect for the MNS variable did not obtain for subjects with a high LOA. High LA (low MNS) subjects exhibited higher initial demands, made fewer concessions, and achieved a larger share of the outcome than subjects with a high LA and a high MNS. These results suggest that the subject's minimum necessary share (MNS) is not synonymous with the subject's level of aspiration. The earlier studies that incorporate one or the other of these variables suggest they are equivalent (Siegal & Fouraker, 1960; Kahan, 1968; Kelley, Beckman, & Fischer, 1967).

Integrative bargaining. The effects of goals on bargaining performance and outcomes also have been examined in integrative bargaining contexts. Integrative

bargaining, which was defined earlier, is different from distributive bargaining. One difference is that integrative bargaining relationships typically involve multiple issues. Perhaps the most important difference between integrative and distributive bargaining revolves around the nature of the conflict. Bargaining processes which emphasize issue by issue compromised do not lead to optimal solutions such as achieving maximum joint benefit.

Pruitt and Lewis (1975) developed an integrative issue structure that incorporates three issues. An example of the structure used by them is shown in Table 1 (p. 8). Two of the three issues offer differential levels of profit to the two parties in the relationship. If the two parties can cooperate it is possible for each to achieve very high outcomes individually as well as jointly. If the individuals do not cooperate, both the individual and joint outcomes are likely to be significantly lower. The likelihood of cooperation is increased if all three issues are treated together rather than as separate and independent issues. If all three are bargained together, it is easier to see that each bargainer can increase his or her outcome share by conceding on the issue, or issues, yielding the lowest payoffs or profits.

Pruitt and Lewis (1975) manipulated the bargaining orientation of the subjects, the subject's limit (MNS),

and communication during bargaining. Based on the results of their study, they concluded that the highest joint profit was achieved when subjects utilized a problem solving orientation, had a high limit (MNS), and communicated truthfully. These dyads achieved a joint profit of \$5,050 which clearly approaches the available maximum (\$5,200). There was an interaction effect of goal and bargaining orientation on the number of agreements reached. Only six of the 11 dyads with an individualistic orientation and a high goal reached agreements. The dyads in this group that did reach agreement however, achieved an average joint profit of \$4,650 under the truthful communication condition and a mean joint profit of \$4,900 under the free communication condition. Although it is clear that the subjects instructed to bargain integratively (i.e., use a problem solving approach) reached agreement more often and achieved the highest joint outcome the behavior of individualistically oriented subjects with high goals is notable. When allowed to communicate freely, many of these subjects (6 of 11 dyads) were able to discover integrative solutions that were almost as high as those of the highest performing dyads in the study.

Bazerman, Maglione, and Neale (1985) found that subjects assigned a moderate profit constraint (goal) achieved higher profits than did subjects without such a goal. Furthermore, the assignment of moderate profit

goals had no significant effect on the number of agreements reached by subjects. Subjects with moderate goals reached as many agreements as did subjects with no assigned goals.

The results of a study by Neale and Bazerman (1985) partially supported the findings of Bazerman, Magliozzi, and Neale (1985). The Neale and Bazerman (1985) study incorporated four levels of goals (no goal, compromise goal, challenging goal, and difficult goal), an issue structure similar to the one developed by Pruitt and Lewis (1975), and a negotiation process that allowed subjects to negotiate with as many other subjects as they could in a 30 minute experimental session. Subjects who were assigned goals achieved greater average profit than did subjects with no assigned goals. Average profit increased as the goal level increased across goal levels. The level of the subject's goal had no effect on the subject's total profit (i.e., the sum of a subject's profits across transactions) except for the difficult goal condition. Total profits of subjects assigned difficult goals were significantly lower than the total profit of subjects assigned to any of the other goal conditions.

The subjects assigned difficult goals reached fewer agreements than did the subjects assigned to one of the other goal conditions. The fact that subjects assigned difficult goals were able to reach fewer agreements than

subjects assigned to the other goal conditions is consistent with the findings of Kahan (1968) and Kelley, Beckman, and Fischer (1967). It has been shown that bargainers assigned difficult or high goals tend to reach fewer agreements and take longer to reach an agreement than those assigned lower or easier goals.

Neale and Northcraft (1986) also found that externally assigned goals led to greater joint profit in negotiations, whether the subjects were experienced (corporate real estate negotiators) or were inexperienced (undergraduate and graduate students). Their study used experienced negotiators as subjects in a bargaining situation that was identical to the one used by Bazerman, Maglione, and Neale (1985). The results of the Neale and Northcraft (1986) study were then compared to the results obtained by Bazerman, Maglione, and Neale (1985). The expert negotiators achieved greater joint profit than did the amateur bargainers in the Bazerman, Maglione, and Neale (1985) study. The difference in the joint profits of the inexperienced and experienced negotiators was less at the end of the experiment than at the beginning, suggesting that bargaining skill may be quickly learned.

Summary

The assignment of goals to individuals in distributive and integrative bargaining relationships has

significant effects on bargaining behavior and bargaining outcomes. Individuals assigned high goals in distributive bargaining situations typically make higher initial demands, fewer concessions, and achieve larger shares of the outcome than do individuals assigned lower goals (Siegal and Fouraker, 1960; Kelley, Beckman, & Fischer, 1967; Kelley, et al., 1970; Holmes, Throop, & Strickland, 1971). There is evidence, however, that subjects assigned high goals tend to take longer to reach agreement and make fewer agreements than those subjects assigned lower goals (Kelley, Beckman, & Fischer, 1967; Kahan, 1968; Kelley, et al., 1970). The negative association between assigned high goals and number of agreements reached was also found by Pruitt and Lewis (1975) for subjects with high goals and an individualistic bargaining orientation and by Neale and Bazerman (1985) for subjects assigned difficult goals.

The results of assigning high goals in integrative contexts are similar to the results found in distributive bargaining situations. Joint outcomes tend to be higher when the assigned goals are high (Pruitt & Lewis, 1975; Bazerman, Maglioni, & Neale, 1985; Neale & Bazerman, 1985; Neale & Northcraft, 1986).

Alternative Outcomes

There is substantial evidence that strong individuals gain more through bargaining than do those with less

strength. There are a number of studies (Thibaut & Fauchex, 1965; Thibaut & Gruder, 1969; Yukl, 1976; Komorita & Kravitz, 1979; Komorita, Lapworth, & Tumonis, 1981; Bacharach & Lawler, 1981).

Thibaut and Fauchex (1965) manipulated both the total reward to be shared and alternative outcomes available to subjects engaged in a dyad bargaining relationship. The subjects in this study were to negotiate the division of points. One subject in each dyad had the power to decide the actual division of the points after negotiation was completed. In the high conflict of interest condition the number of points to be divided was much greater than in the low conflict condition. The alternative for each subject was either high or low. When each subject had a low alternative and the conflict of interest was high, the powerful subject's share of the points was much larger than the low power subject's share. In the low conflict of interest, low alternative outcome condition, the shares to each subject were closer to equal. Subjects with high power were more likely to use their power more often when the stakes were high. But, as the low power subject's alternative outcome increased, these results changed. The subject with low power tended to choose the alternative outcome instead of negotiating an agreement which may be broken. Each time the lower power subject took his or her alternative outcome, the higher power subject was forced to

accept a lower outcome. Subjects with high power agreed to not use their power if the other person would refrain from taking his or her alternative outcome when this was high.

The relationship between an individual's dependence on the relationship and the individual's alternative outcome (Thibaut & Kelley, 1959) is clearly evident in the Thibaut & Fauchex (1965) study. The low power subjects were more dependent on the relationship than their opponents as long as their alternative outcomes were low. They became less dependent as their alternative outcomes increased. Because of their decreased dependence, their share of the outcome increased.

Thibaut and Gruder (1969) obtained similar results to those found by Thibaut and Fauchex (1965). Subjects with low power achieved higher outcomes when their alternative outcome was high than when it was low. High power opponents were more willing to abide by a negotiated settlement if the low power subjects would agree not to take their alternative outcome. This was not true if the low power subject's alternative outcome was low.

Yukl (1976) manipulated the subject's alternative outcome and information available to subjects about the other person's alternative outcome. Subjects were assigned to a no-information, unilateral, or a bilateral information condition. Subjects with a high alternative outcome achieved higher outcome shares than did subjects

with a low alternative outcome. The difference in outcome shares for subjects with high or low alternative outcomes was largest in the bilateral information condition and smallest in the no-information condition although information had no effect on the outcomes. A post hoc analysis suggested that subjects with unilateral information may have had an advantage over those in the no information condition. In a second experiment designed to test this result Yukl (1976) found that unilateral information was an advantage for the subjects who had the information. The author discussed the importance of information with the subjects in the second experiment, however, and also discussed a number of strategies with the subjects.

Similar effects for the alternative outcome variable are also found in studies examining bargaining in coalitions (triads and tetrads). Komorita and Kravitz (1979) manipulated the subject's alternative outcome, prize values, and number of subjects bargaining over the prize (dyads, triads, and tetrads). Two power ratios were used (2:1,; 5:1) in the study. The high power subject's alternative outcome was either two or five times the sum of the alternatives available to the remaining subject or subjects in the bargaining unit. The results for the dyad will be reported. The strong subject (i.e., high CL(alt)) received the largest share of the reward across all prize values. The share for the strong subject was larger in the

5:1 power condition than in the 2:1 power condition across all prize values. The inequality in share value between strong and weak subjects was largest for the smallest prize, decreased as prize value increased to approximately 100 points, and remained essentially constant for prize values above 100 points. This was true for both power conditions. The strong subject received 60% (approximately) of the prizes equal to and greater than 100 points in the 2:1 power condition, and approximately 70% in the 5:1 power condition.

Similar outcomes were obtained by Komorita, Lapworth, and Tumonis (1981) in a study of the effects of alternative outcomes on bargaining outcomes in triads. The alternative outcomes were presented as certain or with varying degrees of rise. The results for the certainty condition are reported. There were three distributions of alternative outcomes used. These were: strong majority (24-24-6), null majority (33-15-6), and weak majority (42-6-6). Prize value manipulations were similar to the ones used by Komorita and Kravitz (1979). The proportionate share for the weak (Low CL(alt)) subject was essentially constant (at approximately 20%) across prize values and for all three distributions of alternative outcomes. The strong subject's proportionate share was essentially constant across all prize values only in the strong majority condition. The strong subject's

proportionate share in the null and weak majority condition was not constant, tending to decrease in a pattern similar to the one seen for the strong subjects in the Komorita and Kravitz (1979) study. The strong subject's share was largest for prize values less than 100 points and decreased to a relatively constant level for prize values greater than 100 points. This pattern was most pronounced in the weak majority condition. The share obtained by the strong subject was largest in the weak majority condition and smallest in the strong majority condition.

Bacharach and Lawler (1981) found that the alternative outcomes available to subjects affected the total number of concessions made during bargaining. Subjects in the high alternative outcome condition made significantly fewer concessions during bargaining than the subjects assigned to the low alternative outcome condition.

Emerson (1962, 1964) also found that individuals with a high alternative outcome achieve larger outcomes or shares of the outcome. In one study (Emerson, 1962) he manipulated the perceived problem solving ability of certain members of Boy Scout patrols. Because of this manipulation, these members became more desirable to other patrols besides their home patrols. Thus, their alternative outcomes were increased. Their home patrols responded to these desirable members increased alternative

outcomes by giving them greater rewards in the form of increased status and recognition.

Emerson's (1964) second experiment used college students as subjects who played a rather complex coalition formation game. The object of the game was to accumulate as many points as possible across 20 trials of the game. Each trial offered a fixed number of points, subjects were organized into triads, and were free to form or not form coalitions within their triad as they chose. The game was structured in such a way that two of the players would accumulate an approximately equal number of points across trials while the points available to the third player were slightly less than the lowest number for the first two players. Although coalition formation was possible on any trial, it was expected that coalition formation would not be perceived to be very important by the subjects until the game was almost complete.

Emerson (1964) hypothesized that two general types of coalitions would be formed. One would involve the two leading players who were expected to split the points equally for the trial in which the coalition formed. The other would involve the low point player and one of the other two players. Because the low point player could form a coalition with either of the other two players this player's alternatives would be increased relative to those for either of the other players. Increased alternatives

yield higher power (lower dependence), thus this player should be able to achieve a larger share of the reward. A total of 98 coalitions were formed, 46 of which were balanced (i.e., the two leaders) with 52 unbalanced coalitions. Almost all (44 of 46) of the balanced coalitions were characterized by an equal division of the reward. In unbalanced coalitions, however, only half (26 of 52) were characterized by an unequal division of the reward. The low point total - high CL(alt) subject did receive the largest share of the reward in each of the unbalanced coalitions that were characterized by an unequal reward division.

Rubin and DiMatteo (1972) examined the effect of differing levels of alternative outcomes on the goals subjects chose for a future negotiation session. Subjects, in this study, were given information about their own position (e.g., their own alternative outcome) then negotiated the price of an object item a programmed opponent. The opponent was programmed to make concessions readily (i.e., a soft strategy) or to make few concessions (i.e., a hard strategy). They found that the subject's alternative outcome did not affect the subject's goal for a future bargaining session. The effect of the opponent's concession strategy accounted for most of the variation in the subjects goals for a future negotiation session.

The evidence from research examining the effects of alternative outcomes on the outcomes of bargaining and concession behavior (Thibaut & Fauchex, 1965; Thibaut & Gruder, 1969; Yukl, 1976; Komorita & Kravitz, 1979; Komorita, Lapworth, & Tumonis, 1981; Bacharach & Lawler, 1981) is quite consistent. High alternative outcomes are associated with achieving a larger share of the outcome, making fewer concessions during bargaining, and the ability to resist exploitation by the other person in the relationship. High alternative outcomes, however, were not found to be related to subjects goals for a future bargaining session (Rubin & DiMatteo, 1972).

Bargaining Costs

The effect of threats, sanction, and other types of bargaining costs has received considerable attention in the bargaining literature (Deutsch & Krauss, 1960; Borah, 1963; Gallo, 1963; Hornstein, 1965; Shomer, Davis, & Kelley, 1966; Komorita & Barnes, 1969; Pruitt & Drews, 1969; Smith & Anderson, 1975).

Komorita and Barnes (1969) found that subjects who were penalized for taking too long to reach an agreement increased their rate of concessions during bargaining. Pruitt and Drews (1969) found that subjects reached agreement in fewer trials when each trial had a cost than when the trials were cost free. If differential costs are

applied to bargaining subjects, the subject with the higher cost tends to concede at a faster rate than the subject with the lower cost.

Deutsch and Krauss (1960) examined the use of threat (i.e., blocking gates) on both the behavior of subjects and the outcomes of bargaining engaged in a trucking game. They found that a threat-counterthreat spiral typically occurred if both subjects had control of blocking gates (i.e., bilateral threat). They also found that the use of threat led to significantly lower joint outcomes.

Borah (1963) obtained similar outcomes to those of Deutsch and Krauss (1960) when blocking gates were incorporated as the threat variable. He did not obtain similar outcomes when shock was used as the threat variable instead of gates. The mean joint outcome of dyads was unaffected when shock was used as the threat variable.

Gallo (1963) found that the incentives assigned to subjects altered the effect that threat had on the outcomes. If points were the incentive incorporated in the bargaining situation dyads lost points across bargaining trials with the largest loss occurring in the bilateral threat condition. When money was substituted for points, however, dyads achieved joint profits across all threat conditions instead of losses.

Subjects in a study by Hornstein (1965) also tended to exhibit a threat-counterthreat conflict spiral. The

subjects with high and equal bilateral threat and those in a low and equal bilateral threat conditions tended to use threat less than did the subjects in a moderate and equal bilateral threat condition. If threat inequality was high, the subject with the highest threat tended to initiate the use of threat. When threat inequality was low, the subject with the lowest threat initiated the use of threat more often.

Shomer, Davis, and Kelley (1966) found that threat facilitated high joint outcomes under certain conditions in which the Deutsch and Krauss (1960) bargaining paradigm was modified by eliminating the longer alternative route. If the longer path was available, the presence of bilateral threat led to mean joint losses. If the longer alternative path was not available, bilateral threat led to lower joint outcomes initially, but as bargaining progressed, the joint outcomes went from losses to profits across trials.

Smith and Anderson (1975) found that threat and communication affected levels of competition but did not affect the joint outcomes achieved by subjects. Subjects with threat tended to compete less than subjects who had threat and who could communicate.

Summary

The review of the bargaining literature indicated that the goals of bargainers, the alternative outcomes available to bargainers, as well as threats and sanctions, have significant effects on bargaining outcomes and the behavior of individual bargainers. Bargainers with high goals tend to make fewer concessions and achieve larger shares of the outcome. This is true in distributive bargaining situations (e.g., Siegal & Fouraker, 1960; Kelley, Beckman, & Fischer, 1967; Holmes, Throop, and Strickland, 1971) and in integrative bargaining situations (e.g., Pruitt & Drews, 1975; Bazerman, Maglione, & Neale, 1985; Neale & Bazerman, 1985; McAlister, Bazerman, & Fader, 1986). There is evidence that bargainers take more time to reach agreement and tend to reach fewer agreements if each bargainer's goal is high (e.g., Kelley, Beckman, & Fischer, 1967; Kahan, 1968; Kelly et al., 1970).

Individual bargainers with high alternative outcomes also tend to achieve larger shares of the outcomes of bargaining. Evidence in support of this relationship between a bargainer's alternative outcome and his or her outcome share has been found in a number of studies (e.g., Emerson, 1962, 1964; Thibaut & Fauchex, 1965; Thibaut & Gruder, 1969; Yukl, 1976; Komorita & Kravitz, 1979; Komorita, Lapworth, & Tumonis, 1981; Backarach & Lawler, 1981).

The effect of bargaining costs, in the form of threats or sanctions on bargaining outcomes or the behavior of individual bargainers, appears to be complex. Some researchers (e.g., Deutsch & Krauss, 1960; Honnstein, 1965) found that threat reduced the joint outcomes of bargaining dyads. Other researchers (e.g., Borah, 1963) concluded that threat had a negative effect some of the time but not all of the time. At least one study (e.g., Shomer, Davis, & Kelley, 1966) concluded that threat facilitated agreement part of the time, while another (Smith & Anderson, 1975) found the availability of threat reduced competition.

CHAPTER 2

METHODOLOGY

The emphasis of this study is on the goals chosen by individuals in a distributive bargaining situation and the processes by which these goals are chosen. In the previous section two theories or models that predict goal setting were presented (Komorita, 1977; Garland, 1985). In each of these models, individuals are believed to use information that describes the bargaining positions (i.e., the alternative outcomes available to each individual and the other person's stated goal) in making their goal choices. The issue is empirical in nature and can be expressed in hypothesis form. Therefore, the issue is available for systematic examination and the predictions derived from the models can be tested.

Bargaining Context

The bargaining situation incorporated in this study is the purchase of a high quality stereo system. A stereo system was chosen, in part, because it is likely to be both familiar and attractive to student subjects. In addition, the fact there usually are a number of sellers

and buyers in a given locality allows operational definitions to be stated in plausible terms. It also appears to be the case that some of these sellers are willing to bargain over the price of these items. The subjects in the study will be assigned to the role of a buyer of a stereo system.

Design of the Study

Independent Variables

The modified strategic power model developed by Komorita (1977), as modified, incorporates five independent variables. These are: the alternative outcome available to each person, the opponent's stated goal, and the costs of prolonging bargaining for each individual in the relationship. The alternative outcome available to the subject, the alternative available to the subject's opponent, and the opponent's goal will be incorporated as independent variables in this study.

The costs of prolonging bargaining, for each bargainer, will not be incorporated in this study. The review of the bargaining literature in Chapter 1 suggests that the effects of threat on bargaining outcomes is mixed. It is also true that the individual's cost of prolonging bargaining does not make a unique contribution to strategic power as long as the costs, of both the individuals in the

relationship, are equal. Keeping the cost terms equal to zero meets the equality condition.

Therefore, the subject's alternative outcome, the opponent's alternative outcome, and the opponent's goal are the variables that act to define the relative levels of strategic power in the relationship. These are operationally defined as follows:

1. The subject will be informed that he or she has visited another seller of stereo systems and received a price for the identical system from this dealer. The price of the system offered by the alternate dealer represents the subject's available alternative outcome.
2. The subject will be informed that a friend of the subject is also planning to purchase an identical stereo system. The subject's friend has made an offer to the dealer with whom the subject plans to bargain. The price offered by the subject's friend represents the seller's alternative outcome.
3. The subject will be informed that the seller has indicated a price for the system the seller would like to receive. This price represents the seller's goal.

Dependent Variables

Three dependent variables were derived from the strategic power model (Komorita, 1977). These are: the goal of the buyer, the buyer's resistance point, and the initial demand or opening offer the buyer would make. The buyer's goal is the variable which is predicted by both the strategic power model and the alternative goal setting model. The buyer's resistance point and initial demand are

derived from the suggestion of Komorita (1977) that these should be related, respectively, to the buyer's and the seller's alternative outcomes.

Operational Definitions

The subject's goal is operationally defined as the price for the item the subject expects the opponent to actually accept as the result of bargaining.

The subject's resistance point is defined as the maximum price the subject would be willing to pay for the item.

The initial demand or opening offer is defined as the initial or opening offer the subject would make to the opponent upon initiation of bargaining.

Experimental Design

It was discussed earlier that the bargaining situation incorporated in this study is the purchase of a stereo system described only as a high quality system.

The design of this experiment is a two by two by two fully crossed, within subjects factorial design. The independent variables are: the subject's available alternative outcome (Factor A); the opponent's available alternative outcome (Factor B); and the opponent's goal (Factor C). The independent variables are represented as prices for the stereo system. Each variable will take one of two values (high or low). The buyer's alternative outcome is the price asked for the stereo system by a different seller. The seller's alternative outcome is the

price for the system that was offered by a friend of the buyer. The seller's goal is the price for the system the seller has indicated he or she wants to achieve. The prices associated with the independent variables are shown in Table 3.

Manipulation Check

In order to evaluate whether the prices representing the variables in the study were perceived as planned, a pilot study was conducted during the 1987 summer semester at the University of Wisconsin Oshkosh. This pilot study was conducted as a class exercise in gathering research data in an Organization Behavior class taught by the author. There were 20 subjects who participated in the pilot study.

As part of this pilot study, the subjects were asked to evaluate the prices representing each independent variable on scales at the end of each section of the

Table 3

Values Assigned to the Independent Variables

	Low	High
Subject's Alternative Outcome	2400	1900
Opponent's Alternative Outcome	400	900
Opponent's Goal	1100	1700

Note: Levels are in terms of price for the stereo system.

experimental materials. These scales were structured as Semantic Differential scales (Osgood, Suci, & Tannenbaum, 1967). The item used to estimate whether the changes in levels for the independent variables were perceived as expected was anchored by the adjectives "low" and "high" at the respective ends of the scale. The ratings from each subject for each independent variable were averaged. The manipulation for each variable was tested by calculating a correlated sample T-test of the differences in the mean ratings for each variable at each of its two values (i.e., low and high). The results of the T-tests are shown in Table 4.

Table 4
Mean Ratings of the Independent Variables

Variable	<u>M</u>	<u>SD</u>	<u>T</u>
Buyer's Alternative Outcome			
Low	2.60	0.681	3.93**
High	1.45	1.504	
Seller's Alternative Outcome			
Low	-0.700	1.658	-2.70**
High	0.600	1.138	
Seller's Goal			
Low	-0.55	1.146	-1.79*
High	0.050	1.317	

Note: n = 20

* p < .05, 19 df, one-tailed

** p < .01, 19 df, one-tailed

The T-tests of the differences between the mean ratings for each independent variable indicate that subjects did perceive the differences in these variables as intended. The direction of the change in mean ratings for each variable is consistent with the expectations for that variable. A low alternative outcome for the subject represents a higher price for the item than the price reflected by a high alternative outcome. Subjects rated the price associated with their low alternative outcome as being higher than the price reflected by their high alternative outcome. Because the relationship between the price and the respective variable is positive for changes in the opponent's alternative outcome or goal, an increase in either of these variables would translate as a price increase. As the data in Table 5 show, mean ratings for the opponent's alternative outcome and goal were significantly higher for these variables in the high condition than in the low condition.

Randomization

The order of presentation of the independent variable manipulations was randomly determined to minimize the likelihood that an order or a practice effect would occur.

Randomization was accomplished by first assigning the values of one through eight to the experimental conditions present in the design. The order of presentation was then

randomly established by blindly entering the random number table in Kirk (1968) to select the order of condition presentation for each subject.

Design Issues

The choice of a within-subjects design instead of a between subjects design offers both benefits and risks. The benefits and problems associated with within subjects designs have been addressed by Greenwald (1976) and Keppel (1982). The benefits of a within-subjects design are mainly in the area of power. Within-subjects designs are more sensitive and powerful than a between subjects design incorporating the same sample size (Greenwald, 1976; Keppel, 1982). The major risk associated with a within-subjects designs is that a context effect bias may be produced from practice effects, sensitization effects, and or carryover effects. In other words, the subject's responses on later trials of the experiment may be influenced by the subject's exposure to the conditions in earlier trials (Greenwald, 1976). Each of these issues (i.e., practice effect, sensitization, and carryover) will be addressed in this section. The steps taken to deal with a particular issue which may be a problem will be noted.

Practice Effect

A practice effect could be present if a subject's performance on later trials was improved relative to the subject's performance on earlier trials. It is argued that a practice effect should not occur in this study for a number of reasons. First, there are no direct cues available to subjects as to what would constitute an appropriate or expected level of performance. The tasks subjects will engage in involves reading some information, then choosing a goal. It is not overt in the sense that physical activity leading to measurable behaviors or performance levels would occur. There is no performance feedback available to subjects because bargaining actually will not take place. Thus, it is should be difficult for the subject or an observer to identify a baseline of performance from which to determine that later performance was better than the subject's earlier performance.

In addition to the issues discussed above it should be noted that each experimental condition incorporates a change in at least one independent variable. Therefore, the base on which subjects are expected to develop their goals will change across conditions. Because no single experimental condition is repeated within the study, a practice effect should not be present. Randomly presenting the sequence of experimental conditions should tend to

spread any practice effects out so a systematic bias should be avoided.

Sensitization refers to subjects identifying the changes for a variable or variables and modifying their responses as a result of the perceived changes. For example, the subjects in a study could detect changes in the independent variables, form a hypothesis about what the experimenter was trying to accomplish, and react to their hypothesis rather than as the experimenter intended. This could be troublesome if such perceptions acted to interfere with the process of interest to the experimenter. If the subject's ability to detect or discriminate between the changes in the experimental variables is an integral aspect of the study, however, then a within-subjects design would be more appropriate than a between-subjects design. The juxtaposition of experimental conditions should serve to increase the likelihood that subjects would discriminate between levels of the independent variables and base their responses on these changes. The ability of subjects to perceive and discriminate between levels of the independent variables are integral and necessary aspects of the present study.

If the effect of one treatment (e.g., an early trial) persists and affects later responses of the subjects in the study, a carryover effect is said to be present. One such carryover effect is the practice effect discussed

earlier. Another form is a physical carryover effect from a drug remaining in the system across trials. Although carryover effects from such variables as drugs are not an issue because neither drugs or assigned goals are present in the study, there is a risk that a differential carry-over effect may occur.

The differential carryover effect that is of concern is what Keppel (1982, p. 371) calls a treatment X position interaction. It exists if an earlier administration of one treatment differentially affects the subject's responses to later treatment conditions. The administration of an earlier treatment would have one effect on a subject's response in a later condition and a different effect in a different condition. Keppel (1982, p. 371) indicates that counterbalancing of treatments does not control for this bias. It is suggested that randomization of treatments also will not control these effects. There are ways to identify whether a treatment X position interaction (i.e., a differential carryover effect) is present in the data. These require post hoc examinations of the data and present implications for interpreting the analytical results. Therefore, the checks for differential carryover effects and the implications for the analysis will be presented and considered in a section of the results chapter (Chapter 3).

Power

Use of a within-subjects (repeated measures) design also yields a significant increase in statistical power. This increase in power can be viewed in two ways. For a given sample size a within-subjects design is considerably more sensitive at detecting the effects of the experimental manipulations than a between-subjects design of equal sample size. Because each subject in the sample encounters all possible variable combinations of variables (in a fully crossed design) it is therefore possible to detect smaller effects associated with the independent variable manipulations than would be the case for a between-subjects design of the same sample size. Looking from a different perspective, it is therefore possible to detect an effect of a given size with significantly fewer subjects using a within subjects design.

In general terms, the power of the F-test to detect a given effect depends, in part, on the size of the effect, the number of subjects in the sample, and the Type I (Alpha) error rate. As any one of these factors change, the power of the F-test will change. There are standard formulas available for estimating the power of the F-test (e.g., Kirk, 1968). This formula (Kirk, 1968, p. 9-11) is also useful for estimating the minimum sample size

necessary to achieve a chosen level of power. In order to do this, it is necessary to identify

1. the minimum expected treatment effect,
2. the number of treatment levels,
3. the population error variance,
4. the probability of a Type I error (Alpha), and
5. the probability of a Type II error (Beta).

There are three independent variables which will take one or the other of two levels in this present study. Thus, there are eight treatment combinations in the study. The type I error rate (Alpha) was selected as $p < 0.05$ and the Type II error rate (Beta) selected was $p < 0.20$. These values were chosen by convention and to achieve a minimum power $(1 - \text{Beta}) = 0.80$. The effect size to be detected is equal to 100. This size was assumed to be reasonable given that the prices used to represent the independent variables are expressed in terms of dollars rounded to the nearest \$100.

Because the error variance of the population from which the sample of subjects is drawn is usually not known, the population error variance must be estimated. According to Kirk (1968) the pooled mean square error (MS_E) term from an analysis of variance may be used as an estimate of the population error variance if the MS_E is available. As one phase of the pilot study data were gathered in a between-subjects design with the same

independent variables as those used in the within-subjects design. These data were analyzed by separate univariate analyses of variance for each of the three dependent variables. The within cells error (MS_E) term associated with each of the dependent variables was taken as the estimate of the population error variance associated with that variable.

The MS_E terms for each of the three dependent variables are: the buyer's Goal = 52850.87719; the buyer's Resistance Point = 186350.91667; and the buyer's Initial Demand = 44337.71930.

According to the formula from Kirk (1968, pp. 9-11), a sample size of 50 subjects would yield a power level that is equal to approximately 0.84 with the subject's resistance point (RP) as the dependent variable. The subject's resistance point was chosen as the critical variable because the Mean Square Error (MSE) associated with the resistance point variable has the largest value of any of the dependent variables. Therefore, a sample size which yields the desired level of power for the subject's resistance point variable is sure to achieve a level of power that is at least as high for both the subject's goal and the initial demand variables.

The sample size for this study was equal to 106 subjects. Therefore, the power of the F-test to detect an effect size equal to 100 on any dependent variable

should be considerably higher than the level estimated prior to the study. A sample size of 106 subjects is estimated to yield a power level which is greater than 0.99.

Subjects

The subjects in this study are students from Fundamentals of Management and Organization Behavior classes in the College of Business Administration, University of Wisconsin Oshkosh. Participation in the study was voluntary, although the participants received extra credit in their respective classes for their participation.

The majority of students in the College of Business Administration, University of Wisconsin Oshkosh are full time undergraduate students between the ages of 18-22 years. There are a number of nontraditional students within the University and the College of Business Administration. These students typically are older than the traditional undergraduate student having entered the University after some number of years in the job market. The proportion of the student body comprised of non-traditional students seems to be increasing. In addition to the nontraditional students, there are a number of foreign transfer students from various countries of the world in attendance at the University.

There are also approximately 500 students enrolled in the evening MBA program offered by the College of Business Administration. Most of these students attend on a part time basis in the classes which best fit their job schedules. From time to time some of the graduate students will be enrolled in one or more of the undergraduate classes offered by the College of Business Administration in order to fulfill the prerequisite requirements of the course of study for the MBA degree.

The majority of the students registered in the College of Business Administration come from the areas surrounding the City of Oshkosh, Wisconsin. These areas are typically rural, with agriculture as the primary economic activity. Many of the students here are first generation college students. Most work part time at a variety of jobs to pay for part or all of their expenses.

A total of 113 students participated in the study. One subject was dropped from the study. This individual apparently did not understand either the directions or the context of the study because he consistently chose an initial demand or opening offer that was significantly higher than the maximum price he was willing to pay for the system. The responses from six other subjects were not included in the analyses because of missing data in one or more of the experimental treatments. The

demographic characteristics of the sample are shown in Table 5.

The composition of the sample appears to reflect the composition of the management classes offered by the College of Business Administration from which the sample was drawn.

Materials

The experimental materials used in this study consisted of an instruction booklet containing a short narrative description of the bargaining situation which was followed by eight sections that contained the experimental manipulations and response questionnaires. The last page

Table 5

Demographic Characteristics of the Experimental Sample

Characteristic	n	%
Gender		
Male	48	45.3
Female	58	54.7
College		
Letters & Science	20	18.9
Business	86	81.1
Class Standing		
Junior	40	37.7
Senior	65	61.3
Graduate	1	0.9

of the booklet contained questions associated with demographic characteristics of the subject. A copy of the experimental materials is shown in the appendix.

In the narrative portion of the instructions, the bargaining situation was described as one in which the subject planned to purchase a high quality stereo system. The subject was informed that he or she had saved a given amount for this purchase, therefore could spend all of that amount if they so desired. They were told that two dealers in their area handled these types of systems and that one of the dealers (Baker) was willing to bargain over the price of a high quality system. They were told that they would know the price for the system asked by Baker's competitor because they had visited this dealer. They also were informed that they had found out the price a friend of theirs had offered Baker for an identical system and the price that Baker was trying to achieve.

The subjects were then told, in the narrative, that the information might be useful to them in determining the price they might get Baker to accept, the maximum price they would be willing to pay, and the opening offer they thought appropriate for a given situation. The subjects were not informed of how the information presented could be useful. They were only told that the information might be useful. The rest of the instructions described the format

in which the price information and the questions associated with the dependent measures would be presented.

The subjects were informed there were no right or wrong answers, that the interest was in their responses to the information provided. They were further informed that the experiment probably could easily be completed in approximately 15 minutes and that they would be debriefed after the session was completed. After answering any questions any subject might have from the briefing, the subjects were instructed to turn their instruction booklet over and begin the experiment. Thereafter, the subjects worked at their own pace until each had completed the study. Upon completion of the experiment, a debriefing was held for those subjects who wished to discuss the experiment. Most subjects chose to leave the experimental area immediately after completing the experiment.

Procedure

The data for this study were collected from groups of subjects in a classroom setting. Group sizes ranged from five to 28 subjects per group. After each subject had entered the experimental (an unused classroom) area and taken a seat, a signup sheet was circulated around the room. The purpose of the signup sheet was to ensure that the subjects would receive appropriate credit for participation while maintaining the subject's anonymity as

far as the experiment itself was concerned. After each subject in a group had signed the signup sheet, the experimental booklets were passed out by the experimenter. The subjects were requested to leave the instruction booklets face down until the signal to begin was given.

Prior to reading the written narrative, subjects were given a short oral briefing. In this briefing subjects were informed that they would be asked to read information describing a bargaining situation, evaluate the information, and respond to a series of questions. Bargaining was explained as the process a buyer and seller might typically follow in establishing an acceptable price for an item in such market situations as bazaars. This description was used to establish the offer-counter offer process in the subjects' minds without creating an assigned goal or other demand effect.

CHAPTER 3

RESULTS

Analysis

All the results reported in this study are derived from the MANOVA subroutine of SPSS^X, version 2.2+. The hypotheses were tested by repeated measures analyses of variance. Each analysis of variance incorporated four factors. The factors are: the subject's available alternative outcome (ALTS), the opponent's available alternative outcome (ALTO), the opponent's goal (GOALO), and the gender of the subject.

Gender was incorporated as a factor because Kimmel et al. (1980) found that women tended to engage in less distributive bargaining behavior than men and were also less interested in the bargaining task than were men. Introducing gender as a factor should not significantly reduce the power of the F-tests derived from the design, given the sample size of 106 subjects. According to Keppel (1982), this design is designated as a (ALTS X ALTO X GOAL) X Gender design. The factors within the parentheses are within-subjects or repeated measures factors with Gender as a between-subjects factor.

There are three dependent variables incorporated in this study. These are:

1. the buyer's goal or the price the buyer believes Baker Stereo would accept;
2. the buyer's resistance point or the maximum price the buyer would be willing to pay for the system;
3. the buyer's initial demand or the initial offer the buyer would make to Baker Stereo.

Hypothesis Tests

Subject's Goal

In order to test the seven hypotheses ($H_1 - H_6$ & H_{10}) predicting the effects of the independent variables on the subject's bargaining goal, a univariate repeated-measures analysis of variance was performed. The alternative outcome available to the subject (ALTS), the alternative outcome available to the subject's opponent (ALTO), and the opponent's goal (GOALO) were the repeated-measures factors with gender as a between subjects factor. The summary statistics from this analysis are shown in Table 6. The means and standard deviations of the subject's goal are reported in Table 7.

There are two hypotheses which test the effect of the seller's goal on the buyer's chosen goal. Hypothesis H_3 is derived from the strategic power model.

Table 6
ANOVA Summary Table: Subject's Goal

Effect	DF	MS	F	Sig. of F	η^2	R ² (Adj.)
Within Cells	104	168040.75				
Constant	1	1194435397	7108.1	.000		
Gender	1	481915.23	2.87	.093		.017
Within Cells	104	10183.92				
ALTS	1	94671.70	9.30	.003	.089	
Gender X ALTS	1	22150.90	2.18	.143		
Model	2	58411.30	5.74	.004		.082
Within Cells	104	22315.51				
ALTO	1	131004.25	5.87	.017	.053	
Gender X ALTO	1	8383.00	.38	.541		
Model	2	69693.62	3.12	.048		.039
Within Cells	104	34888.44				
GOALO	1	48346875	1385.76	.000	.930	
Gender X GOALO	1	1776.43	.05	.822		
Model	2	24174326	692.90	.000		.929
Within Cells	104	10294.32				
ALTS X ALTO	1	19247.17	1.87	.174		
Gender X ALTS						
X ALTO	1	47843.20	4.65	.033	.042	
Model	2	33545.19	3.26	.042		.041
Within Cells	104	16834.88				
ALTS X GOALO	1	16496.81	.98	.325		
Gender X ALTS						
X GOALO	1	51627.89	3.07	.083		
Model	2	34061.35	2.02	.137		.019
Within Cells	104	15185.24				
ALTO X GOALO	1	13954.72	.92	.340		
Gender X ALTS						
X GOALO	1	1480.48	.10	.755		
Model	2	7717.60	.51	.603		.000
Within Cells	104	15062.77				
ALTS X ALTO						
X GOALO	1	2796.70	.19	.667		
Gender X ALTS						
X ALTO X GOALO	1	15375.03	1.02	.315		
Model	2	9085.07	.60	.549		.000

Table 7

Means and Standard Deviations of Subject's Goals
by Condition and Gender

Condition	<u>M</u>	<u>SD</u>
Low ALTS/Low ALTO/Low GOALO		
Male	953.125	146.377
Female	912.931	144.052
Low ALTS/Low ALTO/High GOALO		
Male	1425.000	280.956
Female	1432.759	212.246
Low ALTS/High ALTO/Low GOALO		
Male	1010.417	163.068
Female	949.828	95.889
Low ALTS/High ALTO/High GOALO		
Male	1483.333	220.573
Female	1425.862	161.745
High ALTS/Low ALTO/Low GOALO		
Male	955.208	230.919
Female	912.759	162.824
High ALTS/Low ALTO/High GOALO		
Male	1455.208	246.947
Female	1363.793	258.673
High ALTS/High ALTO/Low GOALO		
Male	971.875	126.704
Female	935.172	95.408
High ALTS/High ALTO/High GOALO		
Male	1450.000	209.356
Female	1387.931	205.262

Note: Males: n = 48, Females: n = 58

- H₃: The buyer will expect to pay a lower price for the commodity if the seller's goal is high than if the seller's goal is low, given that the seller's alternative outcome remains constant.

Hypothesis H₃ reflects the predicted effect of the seller's goal on the buyer's goal. If the seller's alternative outcome remains constant, an increase in the seller's goal would translate into an increase in the seller's motive to reach agreement. The increase in the seller's relative motive to reach agreement should lead the buyer to choose a higher goal because the buyer's strategic power would be increased as discussed in Chapter 1. The increase in the buyer's goal would be expressed as a lower price.

Hypothesis H₁₀ reflects the effect of the seller's goal on the buyer's goal as predicted by the alternative goal setting process which was described in Chapter 1.

- H₁₀: The buyer will expect to pay a higher price for the item if the seller's goal is high than if the seller's goal is low.

The seller's goal (GOAL0) had a significant effect on the bargaining goals chosen by subjects ($F_1, 104 = 1385.76, p = .000$). The summary statistics and the buyer's mean goal levels associated with the opponent's goal are shown in Table 8.

Hypothesis H₃ predicted that the buyer's goal would increase if the seller's goal was increased relative to the alternative outcome available to the seller. The

Table 8

ANOVA Summary Table and Mean Goal Levels Associated
with the Seller's Goal (GOALO) Variable

Effect/ Condition	<u>DF</u>	<u>MS</u>	<u>F</u>	<u>Sig.</u> <u>of F</u>	<u>eta</u> ²	<u>M</u>
Within Cells	104	34888.44				
GOALO	1	48346875	1385.76	.000	.93	
Low GOALO						948.04
High Goal						1425.59

price the buyer was willing to pay for the system increased as the opponent's goal increased. From the buyer's perspective, a higher price represents a lower goal. Therefore, as the opponent's goal increased, the subject's goal decreased. Although the opponent's goal had a significant effect on the subject's goal, the effect is opposite to what was predicted in hypothesis H₃. Therefore, it was concluded that the results did not support hypothesis H₃.

The hypothesis (H₁₀) from the alternative goal setting process predicted that the buyer's goal would decrease as the seller's goal increased. Because there was a significant decrease in the buyer's goal as the seller's goal increased, the null hypothesis associated

with hypothesis H_{10} can be rejected. It is concluded that hypothesis H_{10} was supported by the results of the analysis.

The strategic power model (Komorita, 1977) also predicts the conditions in which the buyer's goal should be lowest and in which the buyer's goal should be highest. These predictions reflect the combinations of the buyer's alternative outcome (ALTS), the seller's alternative outcome (ALTO), and the seller's goal (GOALO) variables in which the seller's motive to reach agreement would be highest or lowest. These predictions are expressed in hypotheses H_4 and H_5 .

- H_4 : The price the buyer will expect to pay for the item will be lowest if the buyer's alternative outcome is high, the seller's alternative outcome is low, and the seller's goal is high.
- H_5 : The price the buyer will expect to pay for the item will be highest if the buyer's alternative outcome is low, the seller's alternative outcome is high, and the seller's goal is low.

The combined sample mean for the conditions specified in hypothesis H_4 was equal to 1405.19. The combined sample mean for the conditions specified in hypothesis H_5 was equal to 977.26. It is clear that the direction of the difference in these two means is contrary to the predictions of H_4 and H_5 . According to the predictions of the strategic power model, the first mean should be lower than the second. Although the difference between these mean goals is significant by the Scheffe S method, the

fact that the difference was in the wrong direction means that hypotheses H_4 and H_5 were not supported.

There were two hypotheses (H_1 , H_2) that test the effects of the buyer's own alternative outcome (ALTS) and the seller's alternative outcome on the buyer's goal. Because the Gender X ALTS X ALTO interaction was significant ($F_{1, 104} = 4.65$, $p = .033$), the results of the followup analyses will be used to test these hypotheses.

The first hypothesis (H_1) examines the effect of the seller's alternative outcome on the buyer's goal as predicted by the strategic power model (Komorita, 1977).

H_1 : The buyer will expect to pay a higher price for the commodity if the seller has a high alternative outcome than if the seller has a low alternative outcome, given that the seller's goal remains constant.

The second hypothesis (H_2) tests the effect of the buyer's own alternative outcome on the buyer's goal. Because these two hypotheses address the effect of two of the variables (ALTS & ALTO) found in the interaction, they will be examined together.

H_2 : The buyer will expect to pay a lower price for the commodity if the buyer's alternative outcome is high than if the buyer's alternative outcome is low.

According to the strategic power model (Komorita, 1977) an increase in the seller's alternative outcome, if the seller's goal remains constant, will reduce the seller's motive to reach agreement. Therefore, the seller's strategic power should increase and the seller

should expect the buyer to make larger concessions. The buyer, who should also realize this, should choose a lower goal or expect to pay a higher price. This is the relationship stated in Hypothesis H_1 .

An increase in the buyer's own alternative outcome should have the opposite effect on the buyer's goal. The buyer's motive to reach agreement would be reduced relative to the seller's. The buyer should expect the seller to make larger concessions, therefore, the buyer should choose a higher goal. This is reflected in the second hypothesis (H_2).

Followup Tests

The cell means derived from the Gender X ALTS X ALTO interaction are reported in Table 9. The interaction plot is shown in Figure 1.

In order to more precisely identify the source of the Gender X ALTS X ALTO interaction, a number of followup analyses were conducted according to the process suggested by Keppel (1982, pp. 303-311). Basically, these followup tests consisted of systematically analyzing simpler components of the three way interaction (e.g., an ALTS X ALTO interaction for females and for males). If one of the simple two-way interactions was significant, the analysis would drop to the next level of reduction which

Table 9

Mean Goal Levels for the Gender X ALTS X ALTO Interaction

Condition	Gender	<u>M</u>
Low ALTS/Low ALTO	M	1189
Low ALTS/High ALTO	M	1246
High ALTS/Low ALTO	M	1205
High ALTS/High ALTO	M	1211
Low ALTS/Low ALTO	F	1173
Low ALTS/High ALTO	F	1188
High ALTS/Low ALTO	F	1138
High ALTS/High ALTO	F	1162

would identify any simple main effects which may be present.

The initial follow up tests of the Gender X ALTS X ALTO interaction consisted of analyzing the simple ALTS XALTO interactions for males and females. The ALTS X ALTO interaction did not reach significance ($F_{1,57} = .22$, $p = .64$) for female subjects. Because the ALTS X ALTO interaction was not significant, the main effects of the variables incorporated can be interpreted. The alternative outcome available to the subject (ALTS) was found to have a significant effect ($F_{1,57} = 10.18$, $p = .002$) on the goals of the female subjects which are shown in Table 9. As the subject's alternative outcome increased, the subject's goal increased. This is shown as a decrease in the mean

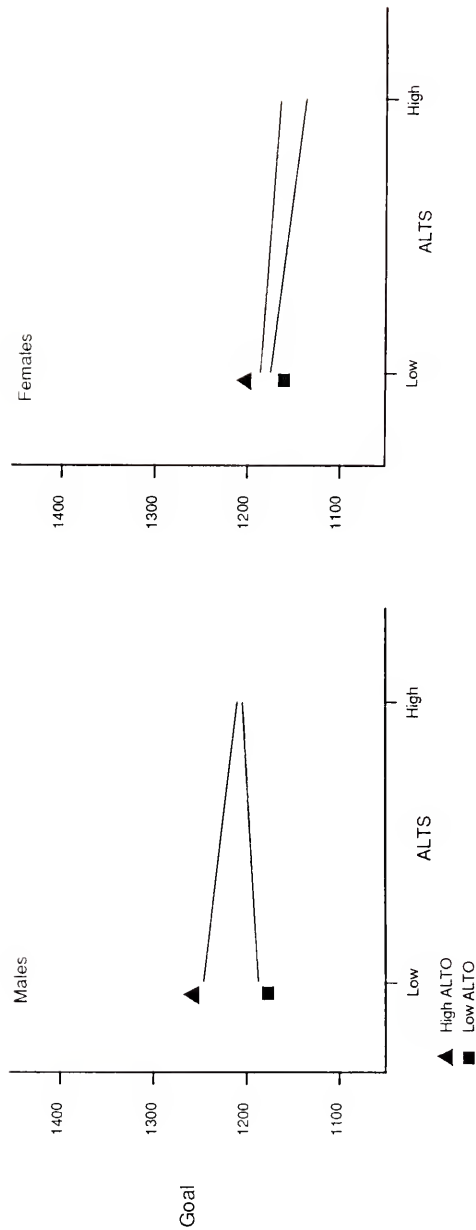


Figure 1. Gender X ALTS X ALTO Interaction.

price levels, as the subject's ALTS increased for each level of the ALTO variable, shown in Table 10. According to the analysis, these differences in mean price levels are significant.

The ALTS X ALTO interaction was significant ($F_{1,47} = 5.60$, $p = .022$) for the male subjects. Because the ALTO variable was not found to have a significant effect on the subject's goal for female subjects, the followup tests of the ALTS X ALTO interaction for males looked at the effect of the ALTS variable at each level of the ALTO variable.

The followup tests indicated that the alternative outcome available to the subjects did not have a significant effect on the subject's goal for male subjects if the opponent's alternative outcome (ALTO) was low. If the opponent's alternative outcome (ALTO) was high, however, the alternative outcome available to the subject (ALTS) did have an effect on the goals chosen by male subjects. The mean goal of the male subjects was equal to

Table 10

Mean Goals of Females: ALTS X ALTO Interaction

Condition	<u>n</u>	<u>M</u>
Low ALTS/Low ALTO	58	1172.85
High ALTS/Low ALTO	58	1138.28
Low ALTS/High ALTO	58	1187.85
High ALTS/High ALTO	58	1161.55

1251.00 if their ALTS was low and equal to 1215.00 if the subject's ALTS was high. The difference between these two means (i.e., 36) is significant.

The results of the followup analyses of the Gender X ALTS X ALTO interaction found that the alternative outcome available to the opponent (ALTO) did not have an effect on the goals of female or male subjects. Therefore, the null hypothesis associated with hypothesis H_1 cannot be accepted. It was concluded that the results therefore did not support hypothesis H_1 .

The alternative outcome available to the subject (ALTS) did have an effect part of the time. An increase in the subject's alternative outcome was associated with an increase in the subject's goal for female subjects. This also was true for male subjects if the opponent's alternative outcome (ALTO) was high, but not when the opponent's alternative outcome was low. It is therefore concluded that the results of this study partially supported hypothesis H_2 .

Subject's Resistance Point

A univariate repeated measure ANOVA was performed with the subject's resistance point as the dependent variable. The resistance point was defined as the maximum price a buyer would be willing to pay for the stereo system. Gender was incorporated as a between-subjects factor with

the buyer's alternative outcome, the seller's alternative outcome, and the seller's goal incorporated as within-subjects factors. The analysis of variance summary statistics are shown in Table 11. The means and standard deviations of the subject's resistance point derived from this analysis are shown in Table 12.

There were two hypotheses (H_6 & H_7) which reflect the suggestion made by Komorita (1977) concerning the buyer's resistance point or the maximum price the buyer would be willing to pay for the system. These hypotheses are shown below.

- H_6 : The maximum price the buyer would be willing to pay for the item will be equal to the price represented by the buyer's alternative outcome.
- H_7 : The maximum price the buyer would be willing to pay for the item will be lower if the buyer has a high alternative outcome than if the buyer's alternative outcome is low.

Komorita (1977) suggested that the alternative outcome available to the buyer should act as a limit to the buyer's resistance point. This is consistent with Thibaut and Kelley (1959). In other words, the buyer probably would not be willing to pay a higher price for the system than the price offered the buyer from an alternate seller. Therefore, the alternative outcome available to the buyer should define the upper boundary of the range of possible agreements or at least be related to this boundary. It reasonably follows that if the buyer's alternative outcome

Table 11
ANOVA Summary Statistics: Subject's Resistance Point

Effect	DF	MS	F	Sig. of F	eta ²	R ² (Adj.)
Within Cells	104	514157.57				
Constant	1	1.37E+09	2659.86	.000		
Gender	1	389558.00	.76	.386		
Within Cells	104	35493.55				
ALTS	1	640200.47	18.04	.000	.147	
Gender X ALTS	1	30970.51	.87	.352		
Model	2	335585.49	9.45	.000		.138
Within Cells	104	35413.86				
ALTO	1	221332.55	6.25	.014	.056	
Gender X ALTO	1	45625.97	1.29	.259		
Model	2	133479.26	3.77	.026		.050
Within Cells	104	71199.06				
GOALO	1	39018408.	548.02	.000	.841	
Gender X GOALO	1	1890.11	.03	.871		
Model	2	19510149.	274.02	.000		.837
Within Cells	104	21755.57				
ALTS X ALTO	1	1426.89	.07	.798		
Gender X ALTS						
X ALTO	1	34744.09	1.60	.209		
Model	2	18085.49	.83	.438		.000
Within Cells	104	21394.19				
ALTS X GOALO	1	38313.68	1.79	.184		
Gender X ALTS						
X GOALO	1	10440.81	.49	.486		
Model	2	24377.24	1.14	.324		.003
Within Cells	104	12115.42				
ALTO X GOALO	1	1426.89	.12	.732		
Gender X ALTO						
X GOALO	1	72319.52	5.97	.016	.054	
Model	2	36873.20	3.04	.052		.037
Within Cells	104	22508.45				
ALTS X ALTO						
X GOALO	1	5200.47	.23	.632		
Gender X ALTS						
X ALTO X GOALO	1	11420.40	.51	.478		
Model	2	8310.43	.37	.692		.000

Table 12

Means and Standard Deviations of Subjects Resistance Point

Condition	<u>M</u>	<u>SD</u>
Low ALTS/Low ALTO/Low GOALO		
Male	1078.125	330.362
Female	1044.828	377.514
Low ALTS/Low ALTO/High GOALO		
Male	1485.417	383.150
Female	1512.069	357.416
Low ALTS/High ALTO/Low GOALO		
Male	1112.500	309.684
Female	1075.862	303.957
Low ALTS/High ALTO/High GOALO		
Male	1581.250	259.013
Female	1500.862	318.507
High ALTS/Low ALTO/Low GOALO		
Male	1045.833	306.635
Female	991.379	252.902
High ALTS/Low ALTO/High GOALO		
Male	1467.708	293.636
Female	1415.517	301.343
High ALTS/High ALTO/Low GOALO		
Male	1072.917	251.370
Female	1037.069	237.043
High ALTS/High ALTO/High GOALO		
Male	1504.167	229.670
Female	1425.862	273.098

Note: Males: n = 48; Females: n = 58

does define the upper bound of the range of possible agreements, the buyer should choose his or her resistance point to be equal to his or her alternative outcome. The buyer's resistance represents the upper limit to the bargaining range by definition. On the other hand, the buyer's resistance point may only be related to his or her alternative outcome.

The alternative outcome available to the subject (ALTS) did have a significant effect ($F_{1,104} = 18.04$, $p = .000$) on the subject's resistance point. The mean levels of the subject's resistance point were 1297.41 if the subject's alternative outcome was low and 1242.45 if this variable was high. According to the analysis the difference in the mean levels of the subject's resistance point for the two levels of ALTS was significant.

Although the ALTS variable was found to affect the subject's resistance point as predicted, the mean levels of the subject's resistance point are not equal or close to the values assigned to the ALTS variable. In the low condition, the value of the ALTS variable was 2400. The value assigned to the ALTS variable if it was high was equal to 1900. Therefore, it is concluded that hypothesis H_6 is not supported by the results of this study.

The significant effect found for the subject's alternative outcome does support the prediction shown in hypothesis H_7 . As the subject's alternative outcome

increased, the subject's resistance point increased or, the price represented by the subject's resistance point decreased.

Interaction

The analysis of variance indicates that a significant three-way interaction was present. The interaction between the subject's Gender, the alternative outcome available to the opponent, and the opponent's goal had a significant effect on the subject's resistance point. The mean levels of the subject's resistance point associated with this interaction are shown in Table 13. A plot of the interaction is shown in Figure 2.

Table 13

Mean Levels of Buyers' Resistance Points Associated
with the Gender X ALTO X GOALO Interaction

Condition	<u>Gender</u>	<u>M</u>
Low ALTO/Low GOALO	M	1062
Low ALTO/High GOALO	M	1477
High ALTO/Low GOALO	M	1093
High ALTO/High GOALO	M	1543
Low ALTO/Low GOALO	F	1018
Low ALTO/High GOALO	F	1464
High ALTO/Low GOALO	F	1056
High ALTO/High GOALO	F	1463

Note: Males: n = 48; Females: n = 58

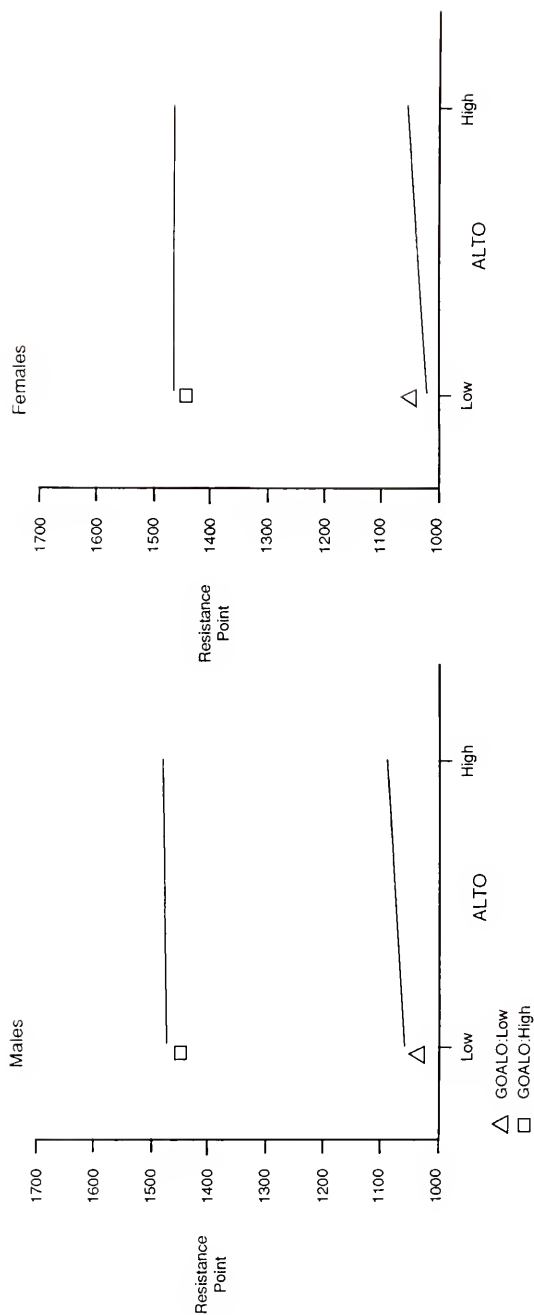


Figure 2. Gender X ALTO X GOALO Interaction.

In order to understand the Gender X ALTO X GOALO interaction, a number of followup analyses were performed. The first of these analyses examined whether an ALTO X GOALO (simple interaction) was present for males or females.

The followup analysis indicated that the simple ALTO X GOALO interaction did not reach significance for males. The alternative outcome available to the opponent (ALTO) was found to have a significant effect on the subject's resistance point ($F_{1,47} = 4.26$, $p = .044$). As the opponent's alternative outcome increased, the subject's resistance point tended to decrease.

It was also found that the seller's goal had a significant effect on the subject's resistance point ($F_{1,47} = 229.09$, $p = .000$). As the opponent's goal increased, the value of the subject's resistance point increased by an average of 432.29.

The ALTO X GOALO interaction did reach significance ($F_{1,57} = 4.04$, $p = .049$) for the female subjects. Because the ALTO X GOALO interaction was significant, a further followup analysis was performed. In this analysis the effect of the ALTO variable on the female subject's resistance point was examined at the two levels (i.e., low & high) of the GOALO variable. According to Keppel this represents an analysis of the simple main effect of the ALTO variable.

The mean levels of the female subject's resistance point were equal to 1014.58 if the ALTO variable was low and 1058.75 if the ALTO variable was high in the condition in which the opponent's goal was low. The increase in the value of the female subject's resistance point of 44.17 was significant according to the analysis ($F_{1,59} = 6.58$, $p = .013$).

If the opponent's goal (GOALO) was high, the change in the opponent's alternative outcome (ALTO) from low to high did not have a significant effect on the female subject's resistance point ($F_{1,58} = .02$, $p = .893$). The difference between the mean levels of the subject's resistance point if the ALTO variable was low (1462.71) and when the ALTO variable was high (1460.59) was not significant.

The source of the Gender X ALTO X GOALO interaction appears to be due to the female subjects' responding to the opponent's alternative outcome (ALTO) in a different way if the opponent's goal was low than if it was high.

Because the effect of the opponent's goal (GOALO) variable on the male subject's resistance point was found to be significant, a similar test was performed for the female subjects. The differences in means associated with the opponent's goal for female subjects were tested for significance by the Scheffe S method. The within cells mean square associated with the significant simple ALTO X GOALO interaction found for the female subjects was used

as the estimate of MS_E needed to calculate the critical value of S .

The mean level of the female subject's resistance point was equal to 1037.28 if the opponent's goal was low. The mean level of the resistance point of the female subjects was equal to 1463.58 if the opponent's goal was high. The critical value of S for testing the mean levels of the female subject's resistance point is equal to 61-03. Because the difference between the mean levels of the female subject's resistance point exceeds the critical value of S , it is concluded that the means are significantly different at $p < .05$.

Subject's Initial Demand

There were two hypotheses (H_8 & H_9) which test the predictions for the buyer's initial demand derived from the strategic power model. A univariate analysis of variance incorporating the subject's alternative outcome (ALTS), the seller's alternative outcome (ALTO), and the seller's goal (GOALO) as within-subjects factors with Gender as a between-subjects factor was performed to test these hypotheses. The summary statistics from this analysis are shown in Table 14. The means and standard deviations of the buyer's initial demands are shown in Table 20. Because the main effect of Gender was not significant and because the Gender variable also did not

Table 14
ANOVA Summary Statistics: Subject's Initial Demand

Effect	DF	MS	F	Sig. of F	η^2	R ² (Adj.)
Within Cells	104	279533.52				
Constant	1	664652786.	2377.72	.000		
Gender	1	9165.59	.03	.857		
Within Cells	104	15096.26				
ALTS	1	171229.36	11.34	.001	.101	
Gender X ALTS	1	4696.69	.31	.578		
Model	2	87963.03	5.83	.004		.083
Within Cells	104	44414.95				
ALTO	1	2711323.7	61.05	.000	.378	
Gender X ALTO	1	97959.03	2.21	.141		
Model	2	1404641.4	31.63	.000		.366
Within Cells	104	72093.46				
GOALO	1	20906748.	290.00	.000	.736	
Gender X GOALO	1	1469.49	.02	.887		
Model	2	10454109.	145.01	.000		.731
Within Cells	104	9901.14				
ALTS X ALTO	1	238.80	.02	.877		
Gender X ALTS						
X ALTO	1	980.09	.10	.754		
Model	2	609.40	.06	.940		.000
Within Cells	104	22267.74				
ALTS X GOALO	1	5969.93	.27	.606		
Gender X ALTS						
X GOALO	1	16622.79	.75	.390		
Model	2	11296.36	.51	.604		.000
Within Cells	104	21245.74				
ALTO X GOALO	1	200828.42	9.45	.003	.084	
Gender X ALTO						
X GOALO	1	552.01	.03	.872		
Model	2	100690.22	4.74	.011		.066
Within Cells	104	17119.12				
ALTS X ALTO						
X GOALO	1	2.95	.00	.990		
Gender X ALTS						
X ALTO X GOALO	1	38045.95	2.22	.139		
Model	2	19024.45	1.11	.333		

interact with any other variables, the combined mean initial demands were used and are shown in Table 15. There were two hypotheses derived from the suggestion of Komorita (1977) that the bargainer's alternative outcome may define the lower bound to the range of possible agreements. If it is true that the bargainer's alternative outcome is perceived as defining the upper bound of the agreement range, it follows that the opponent's alternative outcome should be perceived as defining the other (lower) bound of the agreement range. This would mean that, in the bargaining situation used in this study, the buyer's initial demand should be related to the seller's alternative outcome. This reasoning was reflected in hypotheses H₈ and H₉.

Table 15

Means and Standard Deviations of Subject's Initial Demand

Condition	<u>M</u>	<u>SD</u>
Low ALTS/Low ALTO/Low GOALO	667.45	192.359
Low ALTS/Low ALTO/High GOALO	1017.45	330.659
Low ALTS/High ALTO/Low GOALO	812.26	124.559
Low ALTS/High ALTO/High GOALO	1100.94	265.651
High ALTS/Low ALTO/Low GOALO	645.28	221.201
High ALTS/Low ALTO/High GOALO	984.91	340.600
High ALTS/High ALTO/Low GOALO	788.21	129.017
High ALTS/High ALTO/High GOALO	1066.04	254.348

Note: N = 106

- H₈: The initial price for the item that is offered by the buyer will be equal to the price for the item represented by the seller's alternative outcome.
- H₉: The initial price for the item that is offered by the buyer will be lower if the seller's alternative outcome is low than if the seller's outcome is high.

The buyer's alternative outcome (ALTS) variable also had a significant effect on the buyer's initial demand ($F_{1,106} = 11.34$, $p = .001$). In order to test these hypotheses, the analysis must be checked for interactions.

Interaction

The alternative outcome available to the opponent (ALTO) interacted with the opponent's goal (GOALO) to have a significant ($F_{1,104} = 9.45$, $p = .003$) effect on the subject's initial demand.

The mean levels of the buyer's initial demand associated with the ALTO X GOALO interaction are shown in Table 16. A plot of the ALTO X GOALO interaction is shown in Figure 3.

An examination of the mean initial demands in Table 22 or of Figure 3 suggests that interaction occurred when the seller's alternative outcome (ALTO) variable and the seller's goal (GOALO) variable were both high. The buyer's mean initial demands tend to converge toward the same point if the seller's alternative outcome and the seller's goal are both high.

Table 16

Mean Initial Demands: ALTO X GOALO Interaction

Effect	<u>M</u>
Low ALTO/Low GOALO	656
Low ALTO/High GOALO	1001
High ALTO/Low GOALO	800
High ALTO/High GOALO	1083

Note: N = 106

Hypothesis Tests

A Scheffe S test was used to test whether the mean levels of the subject's initial demand associated with the ALTO or the GOALO variable were significantly different. The within cells mean square associated with the ALTO X GOALO interaction was used as the estimate of MS_E to calculate the critical value of S. The mean levels of the subject's initial demand associated with the ALTO and the GOALO variables are shown in Table 17.

The difference between any of the means shown in Table 17 must equal or exceed 133.55 to be significant. The mean levels of the subject's initial demand associated with the opponent's goal (GOALO) variable were the only ones to meet this test. Therefore, it is concluded that the mean levels of initial demand associated with the GOALO

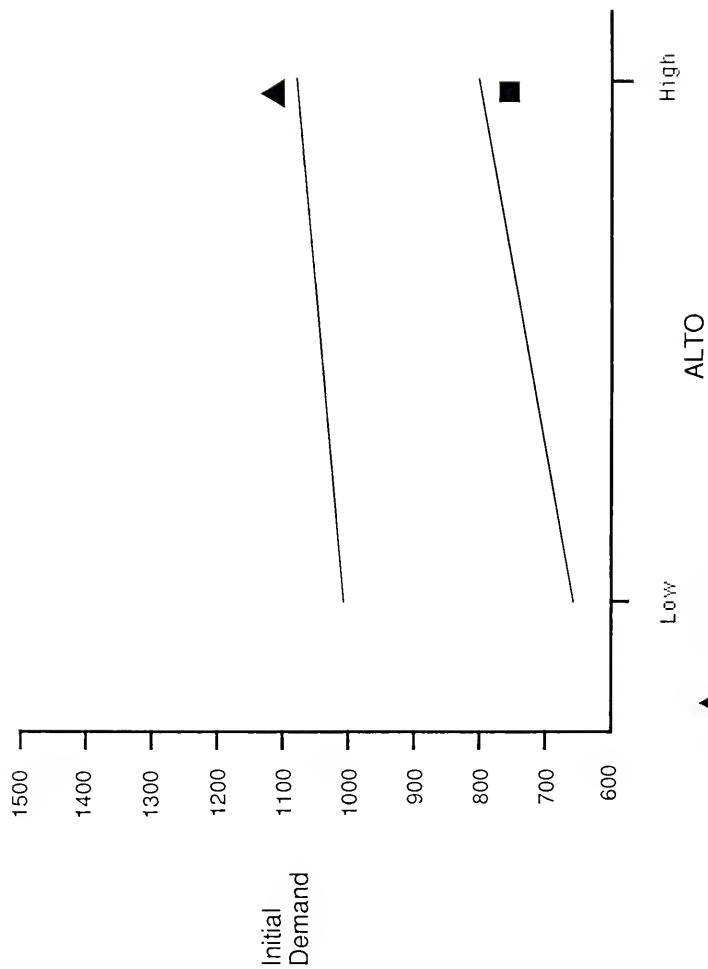


Figure 3. ALTO X GOALO Interaction.

Table 17
Mean Initial Demand: ALTO and GOALO Variables

Variables		<u>M</u>
ALTO	Low	828.78
	High	941.87
GOALO	Low	728.31
	High	1042.34

Note: n = 106

variable are significantly different. Because the ALTO variable did not have a significant effect on the subject's initial demand, neither the prediction shown in hypothesis H₈ or in H₉ were supported.

Summary

On an overall basis, the results of this study did not lend a lot of support to the predictions of the strategic power model. The effect of the opponent's goal variable (GOALO) on the subject's goal which was predicted by the strategic power model did not obtain. The strategic power model predicted that an increase in the alternative outcome available to the subject would lead the subject to increase his or her goal. This prediction received partial support. Male subjects reacted to changes in their alternative outcome as predicted. Female subjects, however, reacted to

a change in their alternative outcome only if the opponent's goal was high.

The strategic power model predicted that subjects would lower their goal if the alternative outcome available to the opponent increased. This prediction also received partial support.

The alternative goal setting process, developed earlier in this paper, predicted that the subjects would lower their goal as the opponent's goal was increased. The responses of the subjects in this study were consistent with this prediction.

The predictions derived from the strategic power model specifying the conditions in which the buyer's goal would be highest and lowest were not supported by this study.

Komorita (1977) suggested that the subject's resistance point may be related to the subject's alternative outcome. The same reasoning associated with the suggestion noted above implies that the subject's initial demand may be related to the opponent's alternative outcome.

The subject's resistance point was found to be related to the alternative outcome available to the subject. Thus, the prediction implied by the suggestion made by Komorita (1977) was supported. But, the opponent's goal was found to have a greater effect on the subject's resistance point. The magnitude of the effect associated with the opponent's

goal was considerably larger than seen for the alternative outcome available to the subject.

The opponent's goal was found to have a significant effect on the subject's initial demand. The effect of the alternative outcome available to the opponent was in the direction predicted for this variable but the mean levels of the subject's initial demand associated with the opponent's alternative outcome were not significantly different by the Scheffe S test.

Design Issues

In Chapter 2, it was pointed out that a within-subjects experimental design can pose special problems (Greenwald, 1976; Keppel, 1982). One of these problems is the possibility that a practice effect could occur which would bias the results of later trials in the experiment (Greenwald, 1976). According to Keppel (1982), bias from the practice effect can be controlled by counterbalancing the presentation of treatments or by randomly presenting the treatments to the subjects. Random presentation of treatment conditions by subject was the technique used in this study. Because randomization tends to work most effectively when large samples are involved, it is possible to have small and spurious non-random patterns of treatment presentations if relatively small samples are involved.

The issue of major concern is what Keppel (1982) calls a "treatment by position" interaction. In such interactions a treatment applied early in the experiment has one effect in a later condition and another in a different condition. This is an example of a differential carryover effect according to Keppel (1982), and it is not controlled by counterbalancing or randomly presenting the treatments. The presence of a treatment by position interaction has significant implications for interpreting the results of studies incorporating within-subjects designs.

There are ways to estimate whether the data from a within-subjects design incorporates a treatment by position interaction. One of these ways involves plotting the responses of subjects by sequence of treatment condition presentation (Keppel, 1982). If the treatment presentations are counterbalanced, this is a relatively straightforward process because the sequences of presentation are known. If the treatment presentations are randomly determined, the process is more difficult for two reasons. First, it may not be possible to reconstruct the sequences of treatment presentation actually used in the experiment. The second reason has to do with an inherent characteristic of randomly presenting treatments.

In order to estimate whether a treatment by position interaction is present, it is necessary to know when a

particular treatment condition occurs in its analogous sequence position. The times when the first experimental treatment is the first of the sequence of treatments, the second treatment falls in the second position of the sequence, and so on. When a random presentation is used, the likelihood that any particular treatment would fall into its associated position is a function of chance. This assumes, of course, that randomization did occur. What this means in practical terms is that the subsample in which a treatment occurs in the appropriate position is likely to be smaller than the original sample and may be very small. If a relatively small sample was used to begin with, it appears quite possible that empty cells would be present in the subsample.

It was possible to reconstruct the sequence of treatment presentation for most of the subjects in this study (i.e., approximately 80%). The eight experimental conditions were separated into eight sections attached to the experimental instructions. Each section could be numbered from one to eight. The section numbers were independent of the experimental conditions for each section as these randomly determined. Therefore, it was possible to go back and reconstruct the sequence of treatment presentation and to identify if a particular treatment condition fell into its analogous position in the presentation sequence.

The data matrices that were developed from the reconstructed treatment sequences were visually examined. The examination indicated that no treatment X positions interactions were present for the opponent's goal variable. Therefore, the treatment X position interactions were examined at each of the two opponent's goal levels.

The first matrix to be examined involves the subject's goal and is reported in Table 18. The same matrix for the opponent's alternative outcome is shown in Table 19. The data shown in Table 18 and Table 19 were plotted to see if a treatment X position interaction was present. The effect of the ALTS variable is shown in Figure 4 with the ALTO variable shown in Figure 5. It is clear from Figure 4 that a treatment X position interaction is present for the ALTS variable. There is a treatment X position interaction for the ALTO variable in the high GOALO condition. The data necessary to detect a treatment by position interaction for the resistance point variable are shown in Tables 20 and Table 21.

The data from Table 20 and Table 21 were plotted to see if there were treatment by position interactions present for the subject's resistance point. These plots are shown in Figure 6 and Figure 7. An examination of the graphs shown in Figures 6 and 7 indicates that a treatment

Table 18
Mean Goals: ALTS

Condition	Position							
	1	2	3	4	5	6	7	8
Low ALTS/ Low GOALO	903 (20)	1000 (20)	943 (14)	955 (19)	948 (25)	932 (14)	942 (13)	994 (17)
High ALTS/ Low GOALO	942 (13)	918 (20)	975 (22)	935 (23)	912 (17)	968 (22)	946 (13)	879 (12)
Low ALTS/ High GOALO	1467 (18)	1394 (18)	1387 (23)	1533 (3)	1289 (9)	1469 (19)	1485 (26)	1474 (27)
High ALTS/ High GOALO	1420 (20)	1423 (13)	1415 (13)	1430 (27)	1495 (20)	1380 (15)	1463 (20)	1327 (15)

Note: Number per cell is shown in parenthesis.

Table 19
Mean Goals: ALTO

Condition	Position							
	1	2	3	4	5	6	7	8
Low ALTO/ Low GOALO	911 (23)	926 (21)	929 (17)	894 (19)	900 (15)	944 (17)	933 (9)	930 (21)
High ALTO/ Low GOALO	935 (10)	995 (19)	992 (19)	985 (23)	952 (27)	963 (19)	950 (17)	987 (8)
Low ALTO/ High GOALO	1388 (17)	1370 (10)	1348 (21)	1431 (16)	1462 (13)	1460 (20)	1491 (27)	1468 (19)
High ALTO/ High GOALO	1486 (21)	1424 (21)	1467 (15)	1450 (14)	1406 (16)	1471 (14)	1453 (19)	1383 (23)

Note: Number per cell is shown in parenthesis.

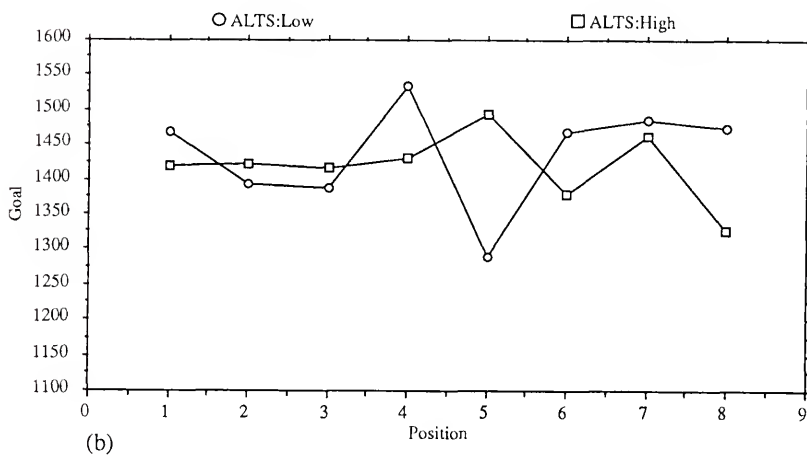
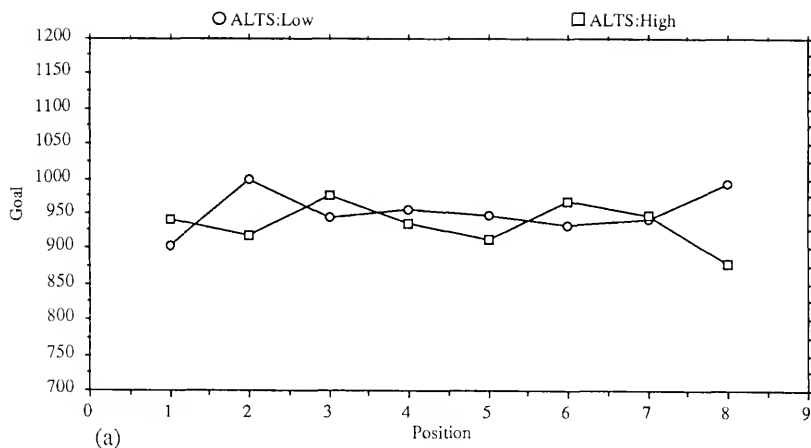


Figure 4. Treatment X Position Interaction: ALTS
(a) GOALO:Low
(b) GOALO:High

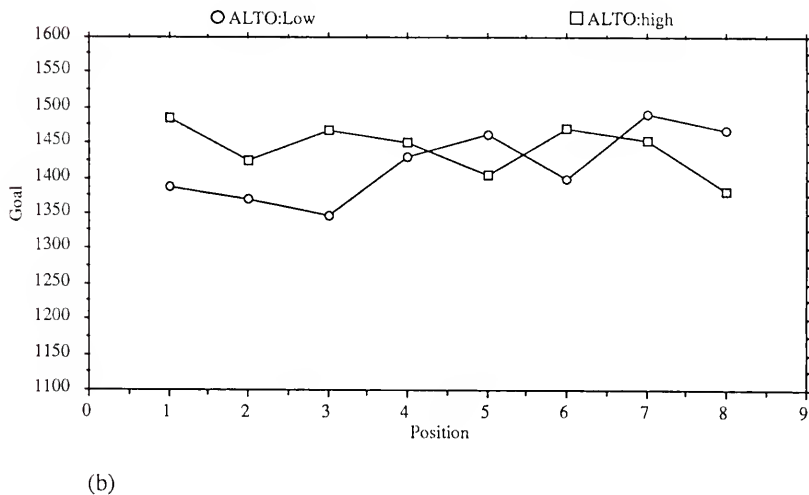
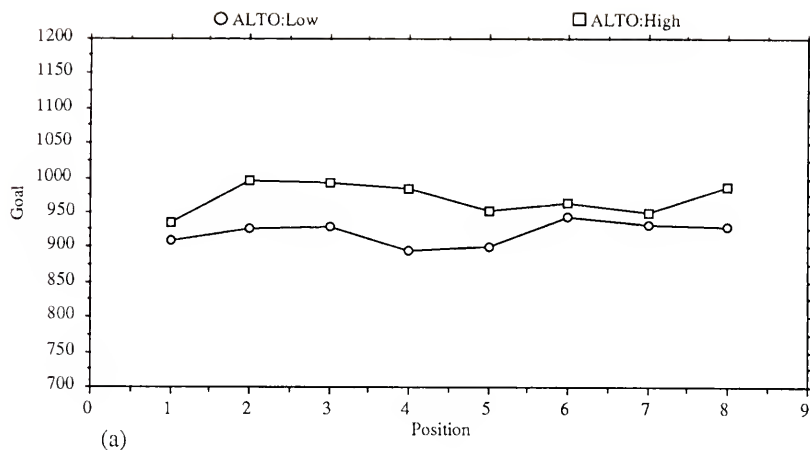


Figure 5. Treatment X Position Interaction: ALTO
(a) GOALO:Low
(b) GOALO:High

Table 20
Mean Assistance Points: ALTS

Condition	Position							
	1	2	3	4	5	6	7	8
Low ALTS/ Low GOALO	1025 (20)	1020 (20)	993 (14)	1079 (19)	1060 (25)	1014 (14)	1177 (13)	1159 (17)
High ALTS/ Low GOALO	1088 (13)	988 (20)	1091 (22)	1093 (23)	900 (17)	1027 (22)	1000 (13)	925 (12)
Low ALTS/ High GOALO	1490 (18)	1489 (18)	1446 (23)	1633 (3)	1489 (9)	1595 (19)	1562 (26)	1508 (26)
High ALTS/ High GOALO	1460 (20)	1500 (13)	1454 (13)	1443 (27)	1595 (20)	1387 (15)	1425 (20)	1363 (16)

Note: Number per cell is shown in parenthesis.

Table 21
Mean Resistance Points: ALTO

Condition	Position							
	1	2	3	4	5	6	7	8
Low ALTO/ Low GOALO	1015 (23)	962 (21)	1094 (17)	953 (19)	953 (15)	988 (17)	1122 (9)	1105 (21)
High ALTO/ Low GOALO	1130 (10)	1050 (19)	1016 (19)	1198 (23)	1019 (27)	1053 (19)	1071 (17)	950 (8)
Low ALTO/ High GOALO	1429 (17)	1430 (10)	4244 (21)	1491 (16)	1508 (13)	1515 (20)	1571 (27)	1495 (19)
High ALTO/ High GOALO	1510 (21)	1524 (21)	1483 (15)	1429 (14)	1606 (16)	1486 (14)	1484 (19)	1417 (23)

Note: Number per cell is shown in parenthesis.

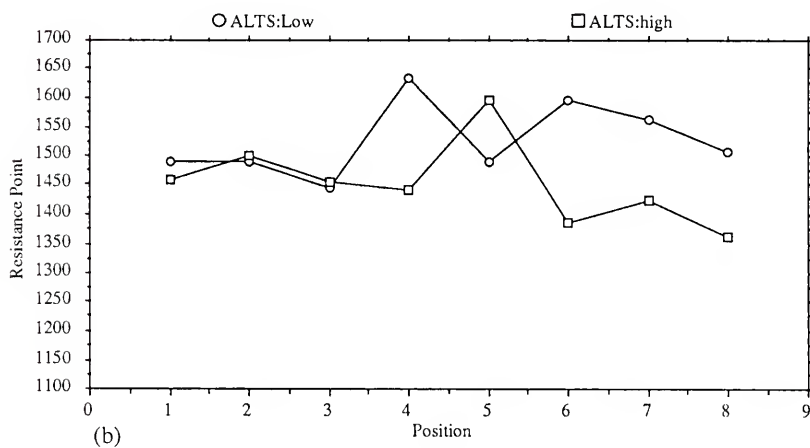
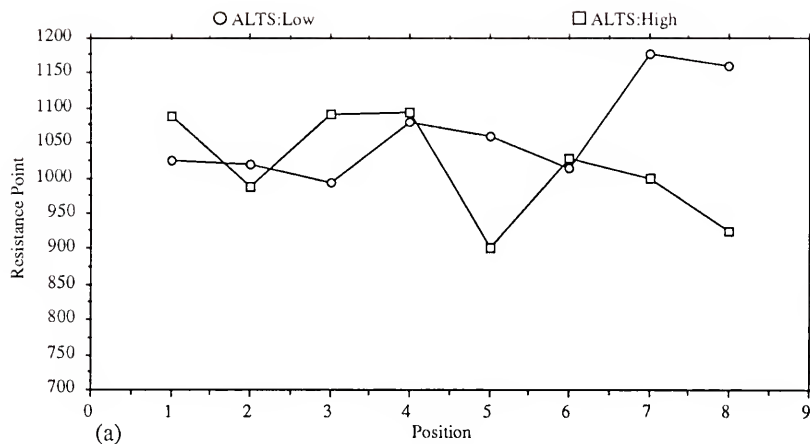


Figure 6. Treatment X Position Interaction: ALTS
(a) GOALO:Low
(b) GOALO:High

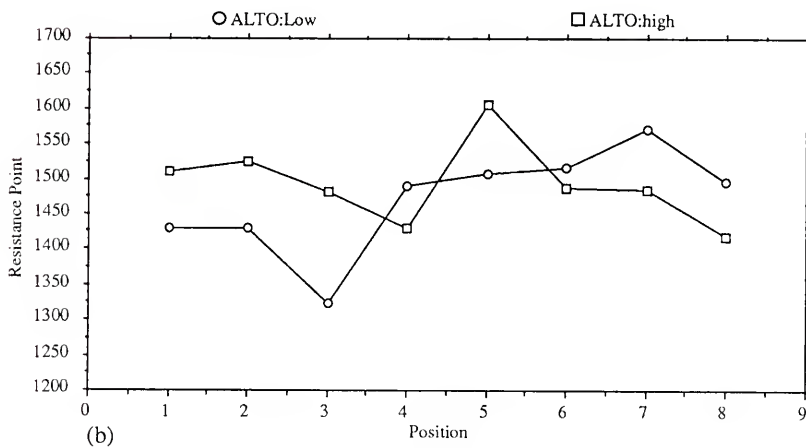
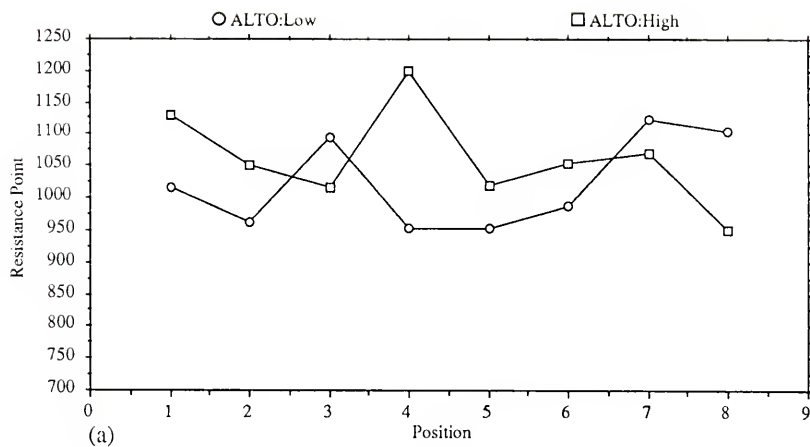


Figure 7. Treatment X Position Interaction: ALTO
(a) GOALO:Low
(b) GOALO:High

X position interaction is present for both the ALTS and the ALTO variables.

The subject's mean initial demands associated with the ALTS and the ALTO variables are shown in Tables 22 and 23, respectively. The data from these tables are plotted in Figure 8 (ALTS) and Figure 9 (ALTO).

It can be seen from Figure 8, that there is a treatment X position interaction associated with the ALTS variable. There is a treatment X position interaction for the ALTO variable, but only when the opponent's goal (GOALO) is high.

It is clear that the effect of the subject's alternative outcome (ALTS), the opponent's alternative outcome, and the opponent's goal differs depending on the level of the variable and position in the sequence. This appears to be an example of a differential carryover effect (Keppel, 1982). According to Keppel (1982), if a treatment X position interaction is crossed, a reversal has occurred. The presence of a crossed treatment X position interaction means the main effects associated with the interaction should be disregarded.

It is clear that the interactions involving the ALTS and the ALTO variables are crossed. Therefore, it is concluded that the main effects associated with these two variables must be discarded.

Table 22
Mean Initial Demand: ALTS

Condition	Position							
	1	2	3	4	5	6	7	8
Low ALTS/ Low GOALO	680 (20)	750 (20)	764 (14)	713 (19)	801 (25)	732 (14)	723 (13)	753 (17)
High ALTS/ Low GOALO	638 (13)	700 (20)	673 (22)	793 (23)	697 (17)	764 (22)	746 (13)	600 (12)
Low ALTS/ High GOALO	1111 (18)	1072 (18)	1074 (23)	1233 (3)	944 (9)	1047 (19)	1019 (26)	1069 (27)
High ALTS/ High GOALO	1100 (20)	1054 (13)	1062 (13)	1015 (27)	1125 (20)	923 (15)	1058 (20)	900 (15)

Note: Number per cell is shown in parenthesis.

Table 23
Mean Initial Demand: ALTO

Condition	Position							
	1	2	3	4	5	6	7	8
Low ALTO/ Low GOALO	589 (23)	667 (21)	588 (17)	682 (19)	647 (15)	691 (17)	622 (9)	662 (21)
High ALTO/ Low GOALO	835 (10)	789 (19)	816 (19)	820 (23)	822 (27)	805 (19)	794 (17)	763 (8)
Low ALTO/ High GOALO	1006 (17)	1010 (10)	1052 (21)	963 (16)	1100 (13)	948 (20)	1020 (27)	987 (19)
High ALTO/ High GOALO	1186 (21)	1090 (21)	1093 (15)	1121 (14)	1044 (16)	1057 (14)	1058 (19)	1026 (23)

Note: Number per cell is shown in parenthesis.

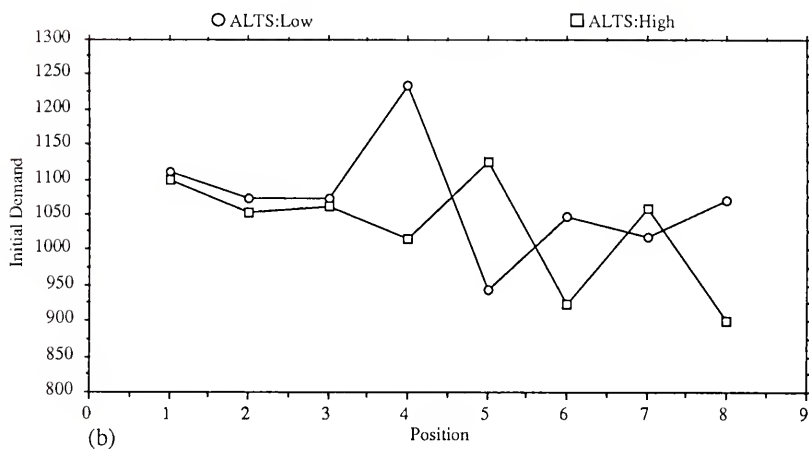
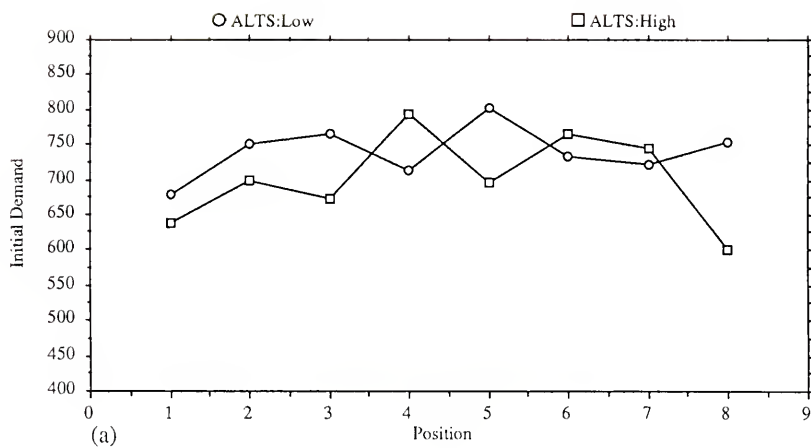


Figure 8. Treatment X Position Interaction: ALTS

(a) GOALO:Low

(b) GOALO:High

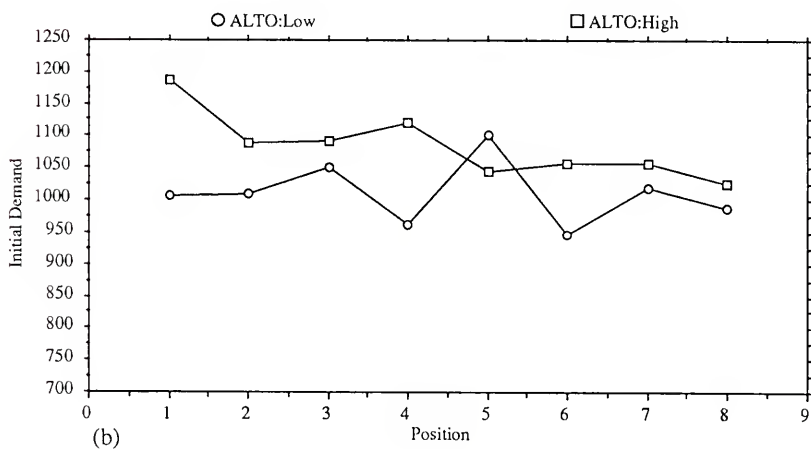
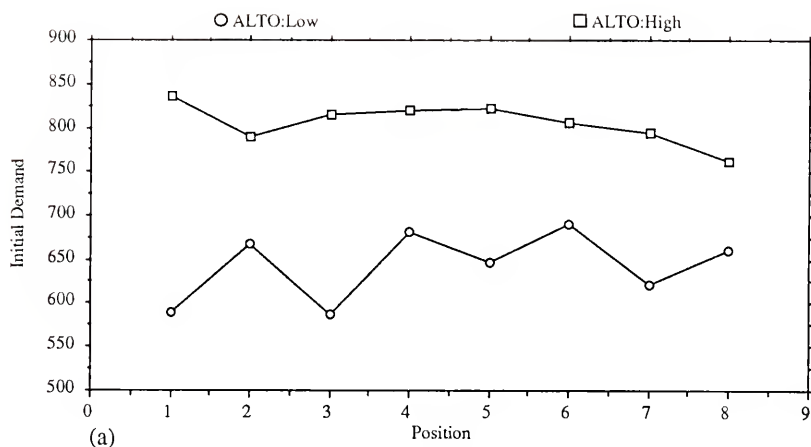


Figure 9. Treatment X Position Interaction: ALTO
(a) GOALO:Low
(b) GOALO:High

CHAPTER 4

DISCUSSION

This study examined goal setting by student subjects in a distributive bargaining situation. The study compared goal setting processes suggested by bargaining power models (e.g., Komorita, 1977) and an alternative goal setting process based on the Garland (1985) task-goal model.

The hypotheses incorporated in this study concerned the effects of three variables associated with the positions of the bargainers on the bargainer's choices. The variables reflecting the two positions were the alternative outcome that was available to the subject, the alternative outcome that was available to the subject's opponent, and the opponent's stated goal. Each of these three variables was expected to affect the goals chosen by the subjects. The alternative outcome available to the subject was expected to affect the resistance point chosen by the subject. The alternative outcome that was available to the subject's opponent was expected to affect the initial demand the subject would make.

Models and Predictions

The bargaining power model proposed by Komorita (1977) incorporates the alternative outcome available to the subject, the alternative outcome available to the subject's opponent, and the opponent's goal as independent variables. The emphasis of this model is on the relationship between these variables as this determines the individual's strategic power within the relationship.

According to the model, an increase in the alternative outcome available to the subject should lead to an increase in the subject's goal. A likewise increase in the alternative outcome available to the subject's opponent should lead to a decrease in the subject's goal. An increase in the opponent's stated goal was predicted to cause the subject to increase his or her stated goal.

Komorita (1977) suggested that the alternative outcome available to the subject may act to define the upper bound of the range of possible agreements. In terms of a buyer's perspective, the upper bound would be the maximum price the buyer would be willing to pay for the item. Therefore, the alternative outcome available to the subject (e.g., a buyer) should be related to the subject's resistance point. The lower bound of the bargaining range would be the resistance point of the subject's opponent. Therefore, the alternative outcome available to the

opponent should define the lower bound of the bargaining range.

If bargaining is assumed to be in good faith, the subject's (e.g., a buyer) initial demand or opening offer will define the lower bound of the bargaining range. Good faith implies that an individual will not retract an offer once it is made in favor of a lower offer. Therefore, if the suggestion by Komorita (1977) is correct, the subject's initial demand should be related to the alternative outcome available to the subject's opponent.

The alternative goal setting process structured around the goal model proposed by Garland (1985) incorporates different assumptions. It is assumed that subjects come to a bargaining relationship expecting to reach a satisfactory outcome through bargaining. They may or may not have a general idea of what would be a satisfactory outcome or a reasonable goal. If they do not have a particular goal in mind, it is assumed they would look to the bargaining context for cues which would help them identify an appropriate bargaining outcome as their goal. It was predicted that the subjects (without a goal) would base their goal on the opponent's stated goal. If the opponent's stated goal was low, the subject's goal would tend to be high. If the opponent's goal was high, the subject's goal would tend to be low.

Experiment

Student subjects as buyers were asked to choose a goal, resistance point, and opening offer in preparation for bargaining with a seller over the price of a stereo system. The information given the subjects consisted of: the alternative outcome available to the subject, the alternative outcome to the seller, and the seller's stated goal. These variables were incorporated as within-subjects factors with gender of the subject as a between-subjects factor. The hypotheses were tested by use of repeated measures analysis of variance with the subject's goal, resistance point, or initial demand as the dependent variables.

Results

The results of the analyses indicated that the seller's goal had a significant main effect on the goals, resistance points, and initial demands chosen by the subjects. As the seller's goal increased, the subject's goal tended to decrease. The prediction of the alternative goal setting process was supported. The predictions of the bargaining power model concerning the goals chosen by subjects were not supported. The alternative outcome available to the subject was found to have a significant effect on the subject's resistance point. There was no significant effect found for the alternative outcome

available to the seller (opponent) on the subject's initial demand. The alternative outcome available to the subject was found to have a significant effect on the subject's initial demand.

Interactions

There were three significant interactions detected in the subject's responses. Gender interacted with the alternative outcome available to the subject and the alternative outcome available to the seller to have an effect on the subject's goal. Followup tests indicated that the alternative outcome available to the subject affected the subject's goal only in some conditions. Gender interacted with the seller's alternative outcome and the seller's goal to have an effect on the subject's resistance point. Followup tests indicated that the subject's resistance point was affected by the opponent's goal. The alternative outcome available to the opponent affected the subject's resistance point part of the time. The alternative outcome available to the seller and the seller's goal interacted to affect the subject's initial demand. Analysis of the interaction revealed that only the seller's goal variable led to significant differences in the subject's initial demand.

Conclusion

Alternative Outcomes

The results of this study did not support some of the predictions of the strategic power model proposed by Komorita (1977). The alternative outcome available to the subject and to the subject's opponent did not consistently exhibit the predicted effect on the subject's goal. The subject's goal tended to increase as the alternative outcome available to the subject increased. The subject's goal also tended to decrease as the alternative outcome available to the subject's opponent increased.

The suggestion made by Komorita (1977) concerning the boundary defining roles of the alternative outcome available to the subject and the subject's opponent received partial support. An increase in the alternative outcome available to the subject was associated with an increase in the subject's resistance point. In other words, as the price of the stereo system from an alternative seller became lower, the maximum price the subject was willing to pay for the system also became lower.

The alternative outcome available to the subject's opponent did not have a significant effect on the subject's initial demand or opening offer. Therefore, the suggestion by Komorita (1977) concerning the boundary

defining aspects of the alternative outcomes available to the bargainers in a relationship is only partially supported. The alternative outcome available to the subject does not appear to define the upper bound to the bargaining range although the upper bound or resistance point appears to be related to it. The alternative outcome available to the subject's opponent clearly does not appear to define the lower bound of the bargaining range as far as the subject is concerned.

Seller's Goal

The most consistent finding of this study was that the seller's goal had a significant effect on the subject's goal, the subject's resistance point, and the subject's initial demand. Both the bargaining power model and the alternative goal setting process predicted that the seller's goal would affect the subject's goal. The effect seen for the seller's goal on the subject's resistance point and the subject's initial demand was unexpected and surprising.

The results of this study clearly indicated that as the seller's goal increased, the subject's goal decreased. In other words, as the price the seller wanted for the stereo system increased, the price the subject expected to pay for the system also increased. The results of the study indicate that the seller's goal was the only

variable in the study to have a significant main effect on the subject's goal. The seller's goal accounted for approximately 90% of the variance in the subject's goal. The effect of the seller's goal on the goal chosen by the subject is consistent with the prediction of the alternative goal setting process and inconsistent with the prediction of the strategic power model (Komorita, 1977). Therefore, the results of this study support the prediction of the alternative goal setting process built around the Garland (1985) relating goals to task performance. The prediction of the strategic power model concerning the effect of the seller's goal are not supported.

Interaction Effects

The presence of three interaction effects was unexpected, especially the two interactions that involved gender. Gender interacted with the subject's Alternative Outcome and the seller's Alternative Outcome to affect the Goals chosen by subjects. Gender also interacted with the seller's Alternative Outcome and the seller's Goal to affect the subject's Resistance Point. The seller's Alternative Outcome interacted with the seller's Goal to have an effect on the subject's Initial Demand.

The source of the Gender X the subject's Alternative Outcome X the seller's Alternative Outcome interaction effect on the subject's goal appears to be clear. Male

subjects responded differently to an increase in their alternative outcome when the opponent's alternative outcome was low than when it was high. If the seller's alternative outcome variable was high, the mean goal of the male subjects increased as their alternative outcome variable increased. This was predicted by the bargaining power model. The mean goal of the male subjects tended to decrease if the seller's alternative outcome variable was low and the subject's alternative outcome variable was high, although the decrease was not significant. The female subjects did not respond to the change in their alternative outcome in this way. An increase in their alternative outcome variable was associated with a higher goal irrespective of the level of the seller's alternative outcome variable.

The source of the Gender X the seller's Alternative Outcome X the seller's Goal interaction effect on the subject's Resistance Point also appears to be clear. Both male and female subjects responded to an increase in the seller's alternative outcome variable by lowering their goal, if the seller's goal was low. If the seller's goal was high, only the mean goal of male subjects showed an analogous decrease for an increase in the seller's alternative outcome. The mean goal of the female subjects did not change as the result of an increase in the seller's

alternative outcome variable when the seller's goal was high.

Followup tests indicated that the seller's (opponent's) had a significant simple main effect. The alternative outcome available to the seller had a significant simple main effect in some conditions only, while the effect of gender was found to be nonsignificant.

The seller's alternative outcome variable interacted with the seller's goal variable to affect the subject's Initial Demand. Followup tests indicated that only the seller's goal had a significant effect on the subject's initial demand. Although the seller's initial demand appeared to increase as the opponent's alternative outcome increased, post hoc comparison of the means associated with the interaction using the Scheffe S method revealed that this change was not significant.

Interpretation

It appears to be clear that the predictions of the strategic power model (Komorita, 1977) concerning the effect of the subject's alternative outcome, the alternative outcome available to the subject's opponent, and the opponent's goal on the subject's goal were only partially supported. The prediction that the subject's goal would be inversely related to the opponent's goal was supported. The patterns of results found in this study, including

those associated with variables that were found not to have a significant effect, suggests that goal setting in bargaining situations is complex.

There probably are three rather distinct ways the subjects in this study could have perceived the information describing the bargaining situation that was presented to them. Each of these appears to be supportable by logically consistent arguments.

1. The individual could use all the information presented. No single item of information would be emphasized over any other item of information. All items would be utilized with an emphasis on the interrelationships of the items of information that were given.

The bargaining power models (e.g., Komorita, 1977) appear to reflect the first process described. The results of this study do not appear to support this first process.

2. The individual could emphasize one or two items of information while essentially ignoring the remaining item or items of information. The individual's choices (e.g., his or her goal) would be based on the one or two items of information perceived by the individual to be important.

The alternative goal setting process that was structured around the Garland (1985) model appears to represent the second process. The results of this study appear to fit the second process better than they do the first process. Some of the results found here (e.g., interactions) suggest, however, that the second process may also not adequately describe how individuals use position related information.

The third way individuals in bargaining situations could use position related information would be to evaluate all the information but do so in a sequential manner rather than as a combination.

3. The individuals could evaluate each item of information as separate and distinct from one another. The utility of each item of information (e.g., the alternative outcome available to each party in the relationship) is that each one would describe a dimension of the issue. Therefore, each individual could use particular items of information such as his or her alternative outcome to identify an appropriate resistance point, for example.

The suggestion by Komorita (1977), that the alternative outcome available to each bargainer should describe the bounds of the range of possible agreements for a given issue appears to reflect the third process. The results of this study offers indirect partial support to the third process shown.

The results of this study indicate that the seller's goal variable had the most consistent and significant effect of the set of independent variables incorporated in the study. The subject's goal was most closely related to the seller's goal. The subject's resistance point and initial demand were also significantly affected by the seller's goal. The evidence from this study suggests that the subjects placed much greater emphasis on the seller's goal variable than on the alternative outcome available to both the buyer and the seller.

The alternative outcome available to the buyer (i.e., the subject) did have a significant effect on the subject's resistance point. This effect was independent of the effect found for the seller's goal on the subject's resistance point.

This effect found for the subject's alternative outcome suggests that subjects may choose their goal, resistance point, and initial demand primarily on the basis of the opponent's goal, but adjust their resistance point based on their own alternative outcome.

The subjects also appear to make a similar adjustment to their initial demands based on the alternative outcome available to their opponent. The effect of the opponent's alternative outcome on the subject's initial demand was not significant, but it was consistent with the suggestion made by Komorita (1977).

The subjects in this study appear to have used the information given them in a way which combines elements of the second and third processes or perhaps even all three. The seller's goal variable appears to have received the greatest emphasis. But, the alternative outcome available to the subject clearly had an effect on the subject's resistance point. It was a small effect compared to the effect seen for the seller's goal but an effect nonetheless. There also appears to be a tendency for subjects to use the information represented by the

alternative outcome available to the opponent when deciding what an appropriate initial demand would be in a given situation. How strong this tendency will be may depend on the relationship between the level of the opponent's goal and the level of the opponent's alternative outcome.

The subjects in this study appeared to process the position related information that was available to them in a systematic manner. They appear to base their choices on the opponent's goal. But, they also appear to use their own alternative outcome and the opponent's alternative outcome to adjust their resistance point and initial demand. The closer in value these variables are to the opponent's goal, the more likely these will be used in setting the subject's resistance point and initial demand.

It does appear to be quite clear that subjects do not process position related information in the manner suggested by the strategic power model (Komorita, 1977) or the bargaining power model proposed by Bacharach and Lawler (1981). The opponent's motive to reach agreement apparently did not affect the goals chosen by subjects.

Interactions Involving Gender

Although the source of the two interactions involving the gender of the subjects appears to be clear, the cause of these interactions is not clear. It is not clear why

the male subjects tend to lower their goal as a function of the increase in their own alternative outcome if the opponent's alternative outcome was low, but did not do so if the opponent's alternative outcome was high. It is also not clear why the mean resistance point of the female subjects was influenced by an increase in the opponent's alternative outcome if the opponent's goal was low but was not similarly influenced by the opponent's available alternative outcome if the opponent's goal was high.

In spite of the fact that the gender factor entered into two interactions (Gender X ALTS X ALTO and Gender X ALTO X GOALO), gender was not found to yield a main effect on this study. Therefore, it can be suggested that a gender effect was present.

It may be possible that a gender effect does exist. The information describing the bargaining positions may be interpreted differently by females and males. Gender is not mentioned in many studies of bargaining (e.g., Kelley, Beckman, & Fischer, 1967; Holmes, Throop, & Strickland, 1975; Yukl, 1976; Komorita & Kravitz, 1979; Komorita, Lapworth, & Tumonis, 1981; Neale & Northcraft, 1986; Huber & Neale, 1986). This lack of mention could be due to the fact that a number of bargaining studies (e.g., Holmes, Throop, & Strickland, 1971; Komorita & Kravitz, 1979; Komorita, Lapworth, & Turmonis, 1981) used single sex samples (i.e., males) as subjects. Kimmel et al. (1980)

did report the presence of a gender effect. They found that females tended to show lower levels of competitive bargaining behavior than males. They also found that the female subjects were less interested in the bargaining situation than male subjects.

Suggestions for Future Research

The results of this study indicate that individuals in bargaining situations appear to use position related information to choose goals for bargaining outcomes and to establish the limits for the bargaining range. These are defined by the subject's resistance point and initial demand. Therefore, the processes by which individuals evaluate this information and make choices should be investigated further.

It would be useful to have a better idea of how individuals perceive position related information. In this study it was assumed they would perceive this information as it is used in the bargaining power models or alternative goal setting process. Because this apparently did not consistently occur, it is reasonable to look at the aspects of the information presented in the study. For example, does the information given really describe the parameters of a particular bargaining situation from the individual's perspective?

It may also be the case that other information besides that which describes the alternative outcomes available to each individual and the opponent's goal would affect the goals chosen by individuals in bargaining situations. Investigating whether other types or kinds of information would be useful to bargainers or be used by bargainers appears to be a reasonable suggestion.

Goals and Bargaining Behavior

Another suggestion is to examine whether the individual's bargaining behavior (e.g., concession behavior, use of threat or sanctions) would be consistent with the goals chosen by the individuals. Would the bargainers attempt to achieve the outcome represented by their goal or would they tend to ignore their goal in the face of threats from their opponent, or the opponent's apparent unwillingness to concede beyond a certain agreement level?

Gender

Whether gender effects are present and whether such effects are consistent should be investigated. The results of this study suggest that a gender effect may exist. Because other studies avoided such an effect (e.g., Holmes, Throop, & Strickland, 1971; Komorita, Lapworth, & Tumonis, 1981) by using same sex individuals in their

studies lends indirect support to the need for further examination. Avoiding a possible effect in this way could be construed as evidence that such an effect is otherwise likely to be present.

Bargaining Power Models

It is also suggested that research should continue to examine bargaining power as it is used in bargaining power models (e.g., Komorita, 1977; Bacharach & Lawler, 1981). The main reason for this suggestion is the fact that this study (as well as others) incorporated a single issue in the bargaining relationship. Although it is true that the models are expressed in terms of a single issue, it may be the case that a single issue may constrain the individuals from acting in a way which is consistent with the model. In other words, a bargainer may have strategic power but there may be few ways that his or her strategic power can be used to gain a better outcome within a given situation if only a single issue is involved.

The central issue associated with a distributive issue is that a gain in outcome for one bargainer means an equal loss in outcome for the other. Therefore, a bargainer who successfully uses his or her power can only force the opponent to accept an outcome that may be significantly lower than the opponent's goal. An opponent might accept such an outcome under certain circumstances, but may choose

to break off bargaining instead. At some point the outcome available to the opponent would be so low that the opponent would prefer to break off bargaining rather than accept the outcome. Furthermore, the evidence from bargaining research (Siegal & Fouraker, 1960; Kelley, Beckman, & Fischer, 1967; Kahan, 1968; Pruitt & Lewis, 1975; Neale & Bazerman, 1985; McAlister, Bazerman, & Fader, 1986; Huber & Neale, 1986) suggests that many bargainers are unwilling to accept outcomes that are below their goal. Thus, there may be no way for strategic bargaining power to benefit the individual with power when a single issue is involved.

If more than one issue is incorporated in the bargaining relationship, the situation is significantly changed. A high goal on one issue could be offset by accepting a much lower outcome on the other issue. The bargainer who accepts a lower outcome on one issue would be compensated by receiving a higher outcome on the other. An example of this is called logrolling. In such situations a number of issues are dealt with more or less simultaneously or as a package. All issues within the package are bargained until a settlement is reached, no single issue is finally settled ahead of any others. Thus, the overall outcome available to each bargainer may be high from that bargainer's perspective. Furthermore, each bargainer's goal for their most crucial or important issue could be achieved. If both bargainers had a high goal on the same

issue for example, one could be persuaded to accept a lower outcome on that issue if his or her outcome on other issues would be increased. The increase in outcome on one or more secondary issues could offset the loss on the primary issue.

Multiple issues have been used in bargaining research as noted earlier. The integrative bargaining structure developed by Pruitt and Lewis (1975) represents one form. It may be possible to incorporate a structure like that of Pruitt and Lewis (1976) with the strategic power model developed by Komorita (1977). The use of a more complex issue structure may enable the strategic power model to be tested in a more realistic way or to be tested more fairly.

There is evidence that individuals (including student subjects) deal with multi-attribute bargaining situations quite well. Much of the integrative bargaining research (e.g., Pruitt & Lewis, 1975; Neale & Bazerman, 1985; McAlister, Bazerman, & Fader, 1986, Huber & Neale, 1986) utilizes a multivariable issue. Tietz and Weber (1978) incorporated a multi-attribute issue structure in a collective bargaining simulation. One result they found was that subjects chose, voluntarily, different goals for the various issues depending on how important the issue was to the individual. The subjects in the studies cited

apparently were able to deal with more than one issue without significant difficulty.

APPENDIX
EXPERIMENTAL INSTRUCTIONS

INSTRUCTION BOOKLET

Participation in this study is voluntary. If you do not wish to participate in this study, please place this booklet face down on your desk or table and leave the experimental area. If you stay it will be assumed that you consent to participate in this experiment. Please do not sign your name or give any other identifying information anywhere in this booklet.

Bargaining Situation

You plan to buy a high quality stereo system that is quite expensive. You could spend as much as \$2800 (the amount you have saved) for this system. There are two dealers from which you could buy the system you want: Able Stereo and Baker Sound. Baker Sound is known for its willingness to bargain with customers over the price of high quality stereo systems whereas Able Stereo tends to be inflexible in regard to price. Because of Baker sound's willingness to bargain and because you want to pay the lowest possible price for this system, you have decided to deal with Baker Sound for this system.

You visited Able Stereo and got their price for the stereo system you want. You also found out the price that your friend Terry offered Baker Sound for a system identical to the one you want. In addition, you have found out the price Baker Sound would like to get for the system.

You can use this information to your advantage when bargaining with Baker Sound over the price of the system. First, it can help you to decide the maximum price you would be willing to pay Baker Sound for the system. This information can help you in identifying the price that Baker Sound would probably accept for the stereo system. Finally, the information can help you to identify the opening offer or initial demand that would be appropriate to make to Baker Sound given the specific circumstances of the situation.

In each section that follows you will be given specific information that describes a bargaining situation. This information will consist of three parts:

1. The price that Able Stereo is asking for the stereo system you want;
2. The price your friend Terry offered to Baker Sound for the identical system; and
3. The price that Baker Sound would like to get for the stereo system you want.

Each item of information can help to describe the bargaining situation. If you are unable to reach a satisfactory deal with Baker Sound for example, you know that you could buy the system from Able Stereo. You also know the price your friend Terry offered to pay Baker Sound for the system.

We would like you to read the specific price information contained in each section. After you have read this information we would like you to indicate the following in the spaces provided.

1. The price for the system that you believe Baker Sound would actually accept.
2. The maximum price you would be willing to pay Baker Sound for the system.
3. The opening offer or initial demand for the system that you would give to Baker Sound.

There are eight sections to this questionnaire. Work on one section at a time starting with the first section. Do not go back and forth between sections.

SECTION 1

Section _____

Specific Information

Able Stereo's quoted price for the system _____

The price for the system your friend Terry offered
to Baker Sound _____The price Baker Sound would like to get
for the system _____

Given this information, please indicate the following in the
spaces provided. (For convenience's sake, please round off your
answer to the nearest hundred, e.g., 100 or 200.)

1. The price you believe that Baker Sound would
actually accept for the system _____
2. The maximum price you would be willing to pay
Baker Sound for the system _____
3. The initial demand (opening offer) that you
would make to Baker Sound for the system _____

SECTION 2

Section _____

Specific Information

Able Stereo's quoted price for the system _____

The price for the system your friend Terry offered
to Baker Sound _____The price Baker Sound would like to get
for the system _____

Given this information, please indicate the following in the
spaces provided. (For convenience's sake, please round off your
answer to the nearest hundred, e.g., 100 or 200.)

1. The price you believe that Baker Sound would
actually accept for the system _____
2. The maximum price you would be willing to pay
Baker Sound for the system _____
3. The initial demand (opening offer) that you
would make to Baker Sound for the system _____

SECTION 3

Section _____

Specific Information

Able Stereo's quoted price for the system _____

The price for the system your friend Terry offered
to Baker Sound _____The price Baker Sound would like to get
for the system _____

Given this information, please indicate the following in the
spaces provided. (For convenience's sake, please round off your
answer to the nearest hundred, e.g., 100 or 200.)

1. The price you believe that Baker Sound would
actually accept for the system _____
2. The maximum price you would be willing to pay
Baker Sound for the system _____
3. The initial demand (opening offer) that you
would make to Baker Sound for the system _____

SECTION 4

Section _____

Specific Information

Able Stereo's quoted price for the system _____

The price for the system your friend Terry offered
to Baker Sound _____The price Baker Sound would like to get
for the system _____

Given this information, please indicate the following in the
spaces provided. (For convenience's sake, please round off your
answer to the nearest hundred, e.g., 100 or 200.)

1. The price you believe that Baker Sound would
actually accept for the system _____
2. The maximum price you would be willing to pay
Baker Sound for the system _____
3. The initial demand (opening offer) that you
would make to Baker Sound for the system _____

SECTION 5

Section _____

Specific Information

Able Stereo's quoted price for the system _____

The price for the system your friend Terry offered
to Baker Sound _____The price Baker Sound would like to get
for the system _____

Given this information, please indicate the following in the
spaces provided. (For convenience's sake, please round off your
answer to the nearest hundred, e.g., 100 or 200.)

1. The price you believe that Baker Sound would
actually accept for the system _____
2. The maximum price you would be willing to pay
Baker Sound for the system _____
3. The initial demand (opening offer) that you
would make to Baker Sound for the system _____

SECTION 6

Section _____

Specific Information

Able Stereo's quoted price for the system _____

The price for the system your friend Terry offered
to Baker Sound _____The price Baker Sound would like to get
for the system _____

Given this information, please indicate the following in the
spaces provided. (For convenience's sake, please round off your
answer to the nearest hundred, e.g., 100 or 200.)

1. The price you believe that Baker Sound would
actually accept for the system _____
2. The maximum price you would be willing to pay
Baker Sound for the system _____
3. The initial demand (opening offer) that you
would make to Baker Sound for the system _____

SECTION 7

Section _____

Specific Information

Able Stereo's quoted price for the system _____

The price for the system your friend Terry offered
to Baker Sound _____The price Baker Sound would like to get
for the system _____

Given this information, please indicate the following in the
spaces provided. (For convenience's sake, please round off your
answer to the nearest hundred, e.g., 100 or 200.)

1. The price you believe that Baker Sound would
actually accept for the system _____
2. The maximum price you would be willing to pay
Baker Sound for the system _____
3. The initial demand (opening offer) that you
would make to Baker Sound for the system _____

SECTION 8

Section _____

Specific Information

Able Stereo's quoted price for the system _____

The price for the system your friend Terry offered
to Baker Sound _____The price Baker Sound would like to get
for the system _____

Given this information, please indicate the following in the
spaces provided. (For convenience's sake, please round off your
answer to the nearest hundred, e.g., 100 or 200.)

1. The price you believe that Baker Sound would
actually accept for the system _____
2. The maximum price you would be willing to pay
Baker Sound for the system _____
3. The initial demand (opening offer) that you
would make to Baker Sound for the system _____

DEMOGRAPHIC INFORMATION

Sex: Male Female

Class Standing: ___ Junior
 ___ Senior
 ___ Graduate Student

College: ___ Letters & Science
 ___ Business

Major: Business
Other (Please identify) _____

REFERENCES

- Bacharach, S.B., & Lawler, E.J. (1981). Bargaining: Power, tactics, and outcomes. San Francisco: Jossey-Bass.
- Bazerman, M. H., Magliozzi, T., & Neale, M. A. (1985). Integrative bargaining in a competitive market. Organizational Behavior and Human Decision Processes, 35(3), 294-313.
- Borah, L.A., Jr. (1963). The effects of threat in bargaining: Critical and experimental analysis. Journal of Abnormal and Social Psychology, 66 (1), 37-44.
- Collyer, C. E., & Enns, J. T. (1986). Analysis of variance: The basic designs. Chicago: Nelson-Hall, Inc.
- Deutsch, M., & Krauss, R.M. (1960). The effect of threat on interpersonal bargaining. Journal of Abnormal and Social Psychology, 61 (2), 181-189.
- Emerson, R. M. (1962). Power-dependence relations. American Sociological Review, 27, 31-40.
- Emerson, R. M. (1964). Power-dependence relations. Two experiments. Sociometry, 27, 282-298.
- Gallo, P. S. (1963). The effects of different motivational orientations in a mixed motive game. Dissertation Abstracts International, 24, 4303-4304. (Order No. 64-3052)
- Garland, H. (1982). Goal levels and task performance: A compelling replication of some compelling results. Journal of Applied Psychology, 67 (2), 245-248.
- Garland, H. (1983). Influence of ability, assigned goals, and normative information on personal goals and performance: A challenge to the goal attainability assumption. Journal of Applied Psychology, 68(1), 20-30.

- Garland, H. (1985). A cognitive mediation theory of task goals and human performance. Motivation and Emotion, 9 (4), 345-367.
- Greenwald, A. G. (1976). Within subjects designs: To use or not to use. Psychological Bulletin, 83(2), 314-320.
- Holmes, J. G., Throop, W. F., & Strickland, L. H. (1971). The effects of prenegotiation expectations on the distributive bargaining process. Journal of Experimental Social Psychology, 7, 582-599.
- Hornstein, H. A. (1965). The effects of different magnitudes of threat upon interpersonal bargaining. Journal of Experimental Social Psychology, 1, 282-293.
- Huber, V. L. & Neale, M. A. (1986). Effects of cognitive heuristics and goals on negotiator performance and subsequent goal setting. Organizational Behavior and Human Decision Processes, 38, 342-365.
- Kahan, J. P. (1968). Effects of level of aspiration in an experimental bargaining situation. Journal of Personality and Social Psychology, 8 (2), 154-159.
- Kelley, H. H. (1966). A classroom study of the dilemmas in interpersonal negotiations. In K. Archibald (Ed.) Strategic interaction and conflict: Original papers and discussion. Berkely: University of California.
- Kelley, H. H., Beckman, L. L., & Fischer, C. S. (1967). Negotiating the division of a reward under incomplete information. Journal of Experimental Social Psychology, 3, 361-398.
- Kelley, H. H., Deutsch, M., Shure, G. H., Fauchex, C., Lanzetta, J. T., Moscovici, S., Nuttin, J. M., Jr., Rabbie, J. M., & Thibaut, J. W. (1970). A comparative experimental study of negotiation behavior. Journal of Personality and Social Psychology, 16, 411-438.
- Keppel, G. (1982). Design and analysis: A researcher's handbook (2nd ed.). Englewood Cliffs, New Jersey: Prentice-Hall.
- Kimmel, M.J., Pruitt, D.G., Magenau, J. M., Konar-Goldband, E., & Carnevale, P. J. D. (1980). Effects of trust, aspiration, and gender on negotiation tactics. Journal of Personality and Social Psychology, 38 (1), 9-22.

- Kirk, R. E. (1968). Experimental design: Procedures for the behavioral sciences. Belmont, California: Brooks/Cole.
- Komorita, S. S. (1977). Negotiating from strength and the concept of bargaining strength. Journal for the Theory of Social Behavior, 7, 65-69.
- Komorita, S. S., & Barnes, M. (1969). Effects of pressures to reach agreement in bargaining. Journal of Personality and Social Psychology, 13, 245-252.
- Komorita, S. S., & Kravitz, D. A. (1979). The effects of alternatives in bargaining. Journal of Experimental Social Psychology, 15, 147-157.
- Komorita, S. S., Lapworth, C. W., & Tumonis, T. M. (1981). The effects of certain vs risky alternatives in bargaining. Journal of Experimental Social Psychology, 17, 525-544.
- Latham, G. P., & Yukl, G. A. (1975). Assigned versus participative goal setting with educated and uneducated wood workers. Journal of Applied Psychology, 60(3), 299-302.
- Locke, E. A. (1968). Toward a theory of task motivation and incentives. Organizational Behavior and Human Performance, 3, 157-189.
- Locke, E. A., Frederick, E., Lee, C. & Bobko, P. (1984). Effect of self-efficacy, goals, and task strategies on task performance. Journal of Applied Psychology, 69(2), 241-251.
- Locke, E. A., Saari, L. M., Shaw, K. N., Latham, G. P. (1981). Goal setting and task performance: 1969-1980. Psychological Bulletin, 90 (1). 125-152.
- McAlister, L., Bazerman, M. H., & Fader, P. (1986). Power and goal setting in channel negotiations. Journal of Marketing Research, 23, 228-236.
- Neale, M. A., & Bazerman, M. H. (1985). The effect of externally set goals on reaching integrative agreements in competitive markets. Journal of Occupational Behavior, 6, 19-32.
- Neale, M. A. & Northcraft, G. B. (1986). Experts, amateurs, and refrigerators: Comparing expert and amateur negotiators in a novel task. Organizational Behavior and Human Decision Processes, 38(3), 305-317.

- Osgood, C. E., Suci, G. J., & Tannenbaum, P. H. (1967). The measurement of meaning. Urbana, Illinois: University of Illinois Press.
- Pruitt, D. G., & Drews, J. L. (1969). The effect of time pressure, time elapsed, and the opponent's concession rate on behavior in negotiation. Journal of Experimental Social Psychology, 5, (43-60).
- Pruitt, D. G. & Lewis, S. A. (1975). Development of integrative solutions in bilateral negotiations. Journal of Personality and Social Psychology, 31(4), 621-633.
- Raiffa, H. (1982). The art and science of negotiation. Cambridge Massachusetts: Belknap.
- Rubin, J. Z., & Brown, B. R. (1975). The social psychology of bargaining and negotiation. New York: Academic Press.
- Rubin, J. Z., & DiMatteo, M. R. (1972). Factors affecting the magnitude of subjective utility parameters in a tacit bargaining game. Journal of Experimental Social Psychology, 8, 412-426.
- Schelling, T. C. (1960). The strategy of conflict. London: Oxford University Press.
- Shomer, R. W., Davis, A. H., & Kelley, H. H. (1966). Threats and the development of coordination: Further studies of the Deutsch and Krauss trucking game. Journal of Personality and Social Psychology, 32 (1), 76-82.
- Siegal, S., & Fouraker, L. E. (1960). Bargaining and group decision making. New York: McGraw-Hill.
- Smith, W. P., & Anderson, A. J. (1975). Threats, communication, and bargaining. Journal of Personality and Social Psychology, 32 (1), 76-82.
- Thibaut, J., & Fauchex, C. (1965). The development of contractual norms in a bargaining situation under two types of stress. Journal of Experimental Social Psychology, 1, 89-102.
- Thibaut, J., & Gruder, C. L. (1969). Formation of contractual agreements between parties of unequal power. Journal of Personality and Social Psychology, 11 (1), 59-65.

- Thibaut, J., & Kelley, H. H. (1959). The social psychology of groups. New York: Wiley.
- Tietz, R., & Weber, H. (1978). Decision behavior in multivariable negotiations. In H. Sauermann (Ed.), Bargaining behavior. Tübingen, Germany: J. C. B. Mohr (Paul Siebeck).
- Walton, R. E., & McKersie, R. B. (1965). A behavioral theory of labor negotiations: An analysis of a social interaction system. New York: McGraw-Hill.
- Yukl, G. A. (1976). Effects of information, payoff magnitude, and favorability of alternative settlement on bargaining outcomes. The Journal of Social Psychology, 98, 269-282.

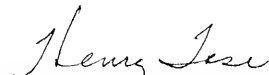
BIOGRAPHICAL SKETCH

Artegal R. Camburn was born in 1937 in Muskegan, Michigan. He received the Bachelor of Philosophy (B.Ph.) with an emphasis in Social Psychology from Thomas Jefferson College of the Grand Valley State Colleges in 1974. He received the Master of Arts in Psychology from Western Michigan University in 1978.

He worked for approximately 20 years before returning to school to pursue his graduate level studies. Most of his work experience is in the area of industrial technology and includes management positions in these areas. He also has retail small business management experience.

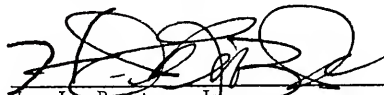
At the present time, Artegal R. Camburn is an Assistant Professor of Management in the College of Business Administration, University of Wisconsin Oshkosh.

I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.



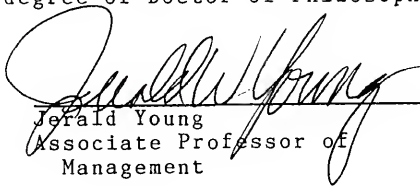
Henry L. Tosi, Chairman
Professor of Management

I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.



H. J. Reitz, Jr.
Professor of Management

I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.



Gerald Young
Associate Professor of
Management

I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.



John G. Lynch
Associate Professor of
Marketing

This dissertation was submitted to the Graduate Faculty of the Department of Management and Administrative Sciences in the College of Business Administration and to the Graduate School and was accepted as partial fulfillment of the requirements for the degree of Doctor of Philosophy.

August, 1988

Dean, Graduate School

UNIVERSITY OF FLORIDA



3 1262 08285 240 0